

Hinweise zur Fehlerursache, -behebung und Teststrategie am System C A D M U S

Wenn die Fehlerursache bei einem Absturz mit Register-Dump nicht selbst
beobachtet werden kann, senden Sie bitte eine ausgefüllte Kopie des be-
gefüllten Dump-Formblattes an den PCS Service

Fehlerzustände des Rechners	mögliche Ursachen	erkennbar an folgen- typischen Merkmalen	Abhilfe
keinerlei Reaktion auf der Konsole nach dem Einschalten	Sicherungen durchgebrannt Prozessor defekt Terminal -Leitung defekt -Terminal defekt -falscher SET-UP- mode serielle Konsole-Schnittstelle defekt Bus-Verlängerung falsch ge- steckt (bei Erweiterungsbox)	Luefter steht	Sicherung austauschen Karte austauschen Leitungen ueberpruefen Ersatz-Terminal Einstellung ueberpruefen Karte austauschen Anschluss der Bus-Verlaengerung kontrollieren
keine Meldung "MINITOR"	Speicher -fehlt -defekt -Adressen falsch eingestellt	Cursor springt um 2 Positionen nach rechts	Speicherkarte austauschen Adressen korrigieren
Schultz-Zeichen auf der Konsole	Setup-mode des Terminals falsch serielle Konsole-Schnittstelle defekt		Setup-Mode neu einstellen Karte austauschen
Keine Terminal-Ein- gabe moeglich trotz Meldung "MINITOR"	Terminal-Rueckleitung defekt Transmit-Baudrate falsch eingestellt Keyboard defekt serielle Konsole-Schnittstelle (Eingang) defekt		Leitung ueberpruefen Setup-mode ueberpruefen Keyboard austauschen Karte austauschen
kein laden von /unix, /nodename/unix oder Standalone- programmen moeglich	Platte noch nicht hochgefahren Stoerungen an der Platte: -Kabelverbindung nicht ok	Meldung: hterror bn=2 ca=2 err=.... Emulx-controller:	10 sec warten, dann erneuter Versuch ueberpruefen

	gelockert oder ist defekt		Meldung: panic, out of swap-space Meldung: panic: no fs illegal opcode exception 38	nötig stecken! Controller testen Unix mit grosserem Swap-Bereich konfigurieren mit /unix hochfahren Unix neu konfigurieren oder Root-Fs restaurieren Speicher- und Prozessor testen Breaktaste an der Systemkonsole drücken Schliessschalter auf LOCK stellen
double-bus-error, d.h. Busfehler während einer Busfehler-Behandlung	Unix-Konfiguration passt nicht zu einer vorhandenen DMA-Verdrahtung ein 22-bit Device-Treiber wird fuer einen 18-bit Controller verwendet oder umgekehrt	kein Echo an der Systemkonsole bei Eingabe (run-Lampe erloschen)		mit unix hochfahren! Unix entsprechend der DMA-Verdrahtung neu konfigurieren mit unix hochfahren! lib3 in /usr/sys anpassen (aus libchoice die passenden Treiber nach lib3 bringen) Unix neu konfigurieren
fsck laeuft nicht	Stacksize von /etc/fsck zu klein /etc/fsck fehlt oder zerstört File /etc/fstab falsch	unter /etc wird das File core erzeugt Meldung: cannot open /dev/...		Stacksize erhoehen mit /bin/atksiz fsck von einem backup-Medium restaurieren fstab korrigieren
/etc/fsck liefert Inkonsistenzen	File-System teilweise zerstört	siehe fsck-Beschreibung		Filesystem reparieren mit fsck oder komplett restaurieren
Absturz beim Uebergang in den multi-user-mode	Zugriff auf nicht vorhandene Controller (fuer Terminals und/oder Drucker) MUNIX falsch konfiguriert	im Register-dump: buserror ... eer=1 access address=ff.... dito		Controller nachruesten oder im Single User Mode hochfahren und die Dateien /etc/ttye und /etc/rc ueberpruefen. In /etc/ttye die angeschlossenen Terminals korrekt eintragen. im Single User Mode mit whatconf die Konfiguration ueberpruefen (auf dz dh und lp achten) Unix neu konfigurieren
Sehr lange Reaktionszeiten nach Uebergang in Multi User Mode	die special-files (unter /dev) fuer die tty's sind falsch generiert	Prozessnummern wachsen rasend an		mit kill -1 1 in den Single User Mode erhalten, dann im Directory /dev: make dh (bei MUX-KE) make dz (bei DZV11)

Komponenten / Modell - Übersicht

Die Tabelle gibt eine Übersicht ueber alle wichtigen Baugruppen, die in den einzelnen Modellen standardmaessig oder optional vorhanden sind.

	S210	S212	S230	S240
	Std Opt	Std Opt	Std Opt	Std Opt
Prozessor QJ68030	x : -	x : -	x : -	x : -
Speicher QSS12	x : x	x : x	x : x	x : x
Ser.Schnittst. SLU-4	x : 0	x : 0	x : x	x : x
Multiplexer MUX-KE	x : -	x : -	x : -	x : -
Par. Schnittst. PDI	x : 0	x : 0	x : 0	x : 0
Rechnerkopplung BSC-KE	- : x	- : x	- : x	- : x
Ethernet 3COM	- : x	- : x	- : x	- : x
Floating Point Proz. FPP81	- : x	- : x	- : x	- : x
Winchester 10MB	x : -	- : -	- : -	- : -
Winchester 20MB	- : -	x : -	- : -	- : -
Winchester 65MB	- : -	- : -	x : -	x : -
Winchester-Erw. 65MB	- : -	- : -	- : x	x : x
Mini-Floppy 8.5MB	x : 0	x : 0	- : 0	- : 0
Streamer 16MB	- : x	- : x	x : 0	x : 0
Magnetband MB100X	- : x	- : x	- : x	- : x
Laser Drucker LBP	- : -	- : x	- : x	- : x
Bit Map Terminal 2200	- : 0	- : x	- : x	- : x

x = vorhanden

0 = nicht sinnvoll/moeglich

- = nicht moeglich

Stand: Dez 83

Schnelltest des Bit-Map-Controllers*Umlauf:*

1. INIT-Taste druecken am Cadmus-Rechner.

2. mit Minitor ab Adresse 33ffe0 lesen :

```
0000 xxxx xxxx xxxx xxx7 0007 0007 0007 xxfc xxxx xxfc xxxx .....
e0   e2   e4   e6   e8   ea   ec   ee   f0   f2   f4   f6   f8...
```

e0 CSR soll 0000 sein nach INIT

e2 SETINT beliebig (nicht lesbar)

e4 MAP0 "

e6 MAP1 "

e8 MAUS soll xxx7 sein (X, Y beliebig, keine Maustaste)

ea " soll 0007 sein (X, Y null, keine Maustaste)

ec " " "

ee " " "

f0 SIO-Steuerwort Kanal 0 unteres Byte soll fc sein

f2 SIO-Datenwort " " beliebig

f4 SIO-Steuerwort Kanal 1 " soll fc sein

f6 SIO-Datenwort " " beliebig

f8 Pixel-Steuerwort 0 beliebig (nicht lesbar)

fa " 1 " "

fc " 2 " "

fe " 3 " "

Lautet die Antwort des MINITOR wie beschrieben, dann ist der Controller mit seiner Standard-Adresse vom WBus erreichbar.

1. The first part of the document is a list of the names of the members of the committee.

2. The second part of the document is a list of the names of the members of the committee.

3. The third part of the document is a list of the names of the members of the committee.

4. The fourth part of the document is a list of the names of the members of the committee.

5. The fifth part of the document is a list of the names of the members of the committee.

6. The sixth part of the document is a list of the names of the members of the committee.

7. The seventh part of the document is a list of the names of the members of the committee.

8. The eighth part of the document is a list of the names of the members of the committee.

9. The ninth part of the document is a list of the names of the members of the committee.

10. The tenth part of the document is a list of the names of the members of the committee.

11. The eleventh part of the document is a list of the names of the members of the committee.

12. The twelfth part of the document is a list of the names of the members of the committee.

• Minitor 2.200

• td test devices

• t test

• tm test memory

• tp test processor

• rf row device floppy

• rw row device winchester 15MB

• hp } rm winchester-

• rp }

• rt tape

• rs streamer

volcopy (lesen von Streamer)

- S root st(0.0) tape rm(0.0) rml

/usr/sys/conf.modul !

ver newconf

Schnelltest des Bit-Map-Controllers

3. Den lokalen Prozessor starten : 33ffe0=1

Im Protokoll des MINITOR muss CSR 0001 sein.

Am Bit-Map-Monitor soll die Versionsnummer angezeigt werden.

Am Bit-Map-Controller soll die LED leuchten.

Durch das lokale Anlaufprogramm wird im SIO-Baustein der Betriebsmodus der Bit-Map-Tastatur eingestellt.

4. Den lokalen Prozessor wieder stoppen : 33ffe0=0

Im Protokoll des MINITOR muss CSR wieder 0000 sein.

5. Tastatur-Test

- 5.1 Mit dem MINITOR ab Adresse 33ffe0 lesen;
das Protokoll muss wie bei 1. aussehen.

- 5.2 Eine Taste der Bit-Map-Tastatur einmal kurz druecken.

Mit dem MINITOR ab Adresse 33ffe0 lesen.

Das untere Byte bei Adresse 33fff0 soll fd sein (Zeichen empfangen),
das untere Byte bei Adresse 33fff2 soll zz sein, wobei zz die ASCII-
Codierung der Taste ist (zz = 20 bei LEERTASTE).

Wieder mit dem MINITOR ab Adresse 33ffe0 lesen.

Das untere Byte bei Adresse 33fff0 soll wieder fc sein.

1. The first part of the document is a letter from the President of the United States to the Congress.

2. The second part of the document is a report on the state of the Union, which includes a detailed account of the events of the year.

3. The third part of the document is a report on the state of the Union, which includes a detailed account of the events of the year.

4. The fourth part of the document is a report on the state of the Union, which includes a detailed account of the events of the year.

5. The fifth part of the document is a report on the state of the Union, which includes a detailed account of the events of the year.

6. The sixth part of the document is a report on the state of the Union, which includes a detailed account of the events of the year.

7. The seventh part of the document is a report on the state of the Union, which includes a detailed account of the events of the year.

8. The eighth part of the document is a report on the state of the Union, which includes a detailed account of the events of the year.

9. The ninth part of the document is a report on the state of the Union, which includes a detailed account of the events of the year.

Schnelltest des Bit-Map-Controllers

6. Maus-Test

6.1 Mit dem MINITOR ab Adresse 33ffe0 lesen;
das Protokoll muss wie bei 1. aussehen.

6.2 Nach jedem Lesen des Maus-Interface werden die X-Y-Zaehler
geloescht.

Beim Protokoll des MINITOR wird das Maus-Interface
bei 33ffe8 zum 1. Mal gelesen,

ea	2. Mal
ec	3. Mal
ee	4. Mal

Folglich darf sich bei jeder Mausbewegung nur der Wert
bei 33ffe8 aendern (xxx7).

6.3 Die Bits (2,1,0) zeigen die Tasten (links,mittel,rechts)
der Maus an, wobei ein Bit den Wert 0 hat, wenn die Taste
gedrueckt wird (waehrend MAUS lesen).

33ffe8	xxx7	keine Taste (oder keine Maus)
	xxx3	linke Taste gedrueckt
	xxx5	mittlere "
	xxx6	rechte "
	xxx0	alle "

100

100

100

100

100

100

100

100

100

Schnelltest des Bit-Map-Controllers

7. Datenwege

- 7.1 Das Programm im EPROM des Controllers ist versionsabhaengig. Deshalb sind hier nur die ersten 16 Worte zum Vergleich angegeben.

Mit MAP0-Register = 0 wird das EPROM selektiert.
Mit MINITOR ab Adresse 33ffe0=0 0 0 0 schreiben.

Mit MINITOR ab Adresse 300000 lesen :

0005 fa00 0000 0100 0000 014a 0000 014a 0000 014a 0000

- 7.2 Zum Test des lokalen RAM muss der lokale Prozessor gestartet werden, damit der Speicher-Refresh anlaeuft.
Mit MAP1-Register = 2 wird das RAM selektiert.

Mit MINITOR ab Adresse 33ffe0=1 0 0 2 schreiben.

Mit dem MINITOR koennen nun beliebige Daten ab Adresse 320000 geschrieben werden und sollen nach beliebiger Zeit wieder gelesen werden koennen.

- 7.3 Zum Test des Bildspeichers sollte der lokale Prozessor gestoppt werden, damit er nicht durch unbeabsichtigte Aktionen den Bildspeicher loescht.
Der Pixelprozessor soll die einzuschreibenden Daten direkt in den Bildspeicher uebertragen.

Mit MAP1-Register 1 = 4 wird der Pixelprozessor und das Steuerwort 0 selektiert.

Mit MINITOR ab Adresse 33ffe0=0 0 0 4 schreiben,
auf Adresse 33fff8=3f00 schreiben.

Ab Adresse 320000.100=5555555555555555 schreiben,
320100.100=aaaaaaaaaaaaaaaa schreiben.

Beide Muster muessen auf dem Bit-Map-Monitor unterscheidbar und per MINITOR lesbar sein.

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Schnelltest des Bit-Map-Contollers

8. Interrupt an den QBus.

Die Interrupt-Leitung des QBus muss zwischen dem CADMUS-Prozessor und dem Bit-Map-Controller lueckenlos sein.

Zum Test wird im Speicher des CADMUS-Rechners ein kleines Programm gestartet, aus dem der Rechner nur durch den einwandfreien Interrupt ohne Fehlermeldung in den MINITOR (.) gelangt.

Der lokale Prozessor muss gestartet und der QBus-Interrupt freigegeben werden.

Der CADMUS-Prozessor setzt alle Interrupt-Ebenen aktiv, schreibt eine Vektornummer ins QINT-Register des Controllers und loest damit selbst den Interrupt aus.

Mit MINITOR auf Adresse 33ffe0=41 schreiben.

Mit MINITOR folgende Daten schreiben :

e0=ff 8014

444=46fc 0 247c 33 ffe8 34bc 38 60fe 0 0 0 0

g444

NAME

configuration information - table of interrupt vector and device addresses

SYNOPSIS

cat /usr/sys/confinfo

DESCRIPTION

Confinfo is a table of the interrupt vectors and device addresses used in **MUNIX**. Addresses are listed both in octal and hex notation. Please note that the octal values of interrupt vector addresses have to be used to switch DEC or DEC-compatible controller boards. The MC68000 processor assumes them to be interrupt vector numbers and computes the memory address by multiplying with 4 (resulting in the hex values).

Configuration Information					
Device	Interrupt Vec.		Device Address		max. Units/Lines
	octal	hex	octal	hex	
console	60	C0	777560	FFFF70	1
bip	70	E0		0	1
ether	100	100	764330	FFE8D8 rx	1
	104	110	764332	FFE8DA tx	
	110	120			
lbp	120	140	770000	FFF000	1
kedqs			770400	FFF100	4 Lines
port 0	140	180	770440	FFF120-14F	
port 1	144	190	770520	FFF150-17F	
port 2	150	1A0	770600	FFF180-1AF	
port 3	154	1B0	770660	FFF1B0-1FF	
rl	160	1C0	774400	FFF900	4 Drives
hl	164	1D0	774420	FFF910	4 Drives
vp	174	1F0 plot	777400	FFFF00	1
	204	210 print			
lp	200	200	777514	FFFF4C	1
hk	210	220	777440	FFFF20	8 Drives
rk	220	240	777400	FFFF00	4 Drives
tm	224	250	772520	FFF550	8 Drives
ot/ox	230	260	775600	FFFB80 csr	4 Drives
			775640	FFFB80 data	
st alter.	240	280	777600	FFFF80 csr	1 Drive
			777640	FFFF80 data	

number

Configuration Information					
Device	Interrupt Vec.		Device Address		max. Units/Lines
	octal	hex	octal	hex	
rm	254	2B0	776700	FFFD C0	8 Drives
hp	254	2B0	776700	FFFD C0	2 Drives
rx2	264	2D0	777170	FFFE 78	2 Drives
hx2	270	2E0	777150	FFFE 68	2 Drives
st	270	2E0	777600 777640	FFFF 80 csr FFFF A0 data	1 Drive
tty					8 Lines
1	300	300	776500	FFFD 40	
2	310	320	776510	FFFD 48	
3	320	340	776520	FFFD 50	
4	330	360	776530	FFFD 58	
5	340	380	776540	FFFD 60	
6	350	3A0	776550	FFFD 68	
7	360	3C0	776560	FFFD 70	
8	370	3E0	776570	FFFD 78	
slu					7 Lines and Console (port 0)
0	304	310	776040	FFFC 20	
1	300	300	776000	FFFC 00	
2	314	330	776140	FFFC 60	
3	310	320	776100	FFFC 40	
4	324	350	776240	FFFC A0	
5	320	340	776200	FFFC 80	
6	334	370	776340	FFFC E0	
7	330	360	776300	FFFC C0	
dz(v)					32(16) Lines
1st	330	360	760100	FFE0 40	
2nd	340	380	760110	FFE0 48	
3rd	350	3A0	760120	FFE0 50	
4th	360	3C0	760130	FFE0 58	
dh	340	380	760020	FFE0 10	16 Lines
td	370	3E0	777600 777640	FFFF 80 csr FFFF A0 data	2 Drives

FILES

/usr/sys/confinfo

No.	Name	Dimensions		Material	
		Height	Width	Length	Weight
1	Red	1.5	1.5	1.5	1.5
2	Red	1.5	1.5	1.5	1.5
3	Red	1.5	1.5	1.5	1.5
4	Red	1.5	1.5	1.5	1.5
5	Red	1.5	1.5	1.5	1.5
6	Red	1.5	1.5	1.5	1.5
7	Red	1.5	1.5	1.5	1.5
8	Red	1.5	1.5	1.5	1.5
9	Red	1.5	1.5	1.5	1.5
10	Red	1.5	1.5	1.5	1.5
11	Red	1.5	1.5	1.5	1.5
12	Red	1.5	1.5	1.5	1.5
13	Red	1.5	1.5	1.5	1.5
14	Red	1.5	1.5	1.5	1.5
15	Red	1.5	1.5	1.5	1.5
16	Red	1.5	1.5	1.5	1.5
17	Red	1.5	1.5	1.5	1.5
18	Red	1.5	1.5	1.5	1.5
19	Red	1.5	1.5	1.5	1.5
20	Red	1.5	1.5	1.5	1.5
21	Red	1.5	1.5	1.5	1.5
22	Red	1.5	1.5	1.5	1.5
23	Red	1.5	1.5	1.5	1.5
24	Red	1.5	1.5	1.5	1.5
25	Red	1.5	1.5	1.5	1.5
26	Red	1.5	1.5	1.5	1.5
27	Red	1.5	1.5	1.5	1.5
28	Red	1.5	1.5	1.5	1.5
29	Red	1.5	1.5	1.5	1.5
30	Red	1.5	1.5	1.5	1.5
31	Red	1.5	1.5	1.5	1.5
32	Red	1.5	1.5	1.5	1.5
33	Red	1.5	1.5	1.5	1.5
34	Red	1.5	1.5	1.5	1.5
35	Red	1.5	1.5	1.5	1.5
36	Red	1.5	1.5	1.5	1.5
37	Red	1.5	1.5	1.5	1.5
38	Red	1.5	1.5	1.5	1.5
39	Red	1.5	1.5	1.5	1.5
40	Red	1.5	1.5	1.5	1.5
41	Red	1.5	1.5	1.5	1.5
42	Red	1.5	1.5	1.5	1.5
43	Red	1.5	1.5	1.5	1.5
44	Red	1.5	1.5	1.5	1.5
45	Red	1.5	1.5	1.5	1.5
46	Red	1.5	1.5	1.5	1.5
47	Red	1.5	1.5	1.5	1.5
48	Red	1.5	1.5	1.5	1.5
49	Red	1.5	1.5	1.5	1.5
50	Red	1.5	1.5	1.5	1.5
51	Red	1.5	1.5	1.5	1.5
52	Red	1.5	1.5	1.5	1.5
53	Red	1.5	1.5	1.5	1.5
54	Red	1.5	1.5	1.5	1.5
55	Red	1.5	1.5	1.5	1.5
56	Red	1.5	1.5	1.5	1.5
57	Red	1.5	1.5	1.5	1.5
58	Red	1.5	1.5	1.5	1.5
59	Red	1.5	1.5	1.5	1.5
60	Red	1.5	1.5	1.5	1.5
61	Red	1.5	1.5	1.5	1.5
62	Red	1.5	1.5	1.5	1.5
63	Red	1.5	1.5	1.5	1.5
64	Red	1.5	1.5	1.5	1.5
65	Red	1.5	1.5	1.5	1.5
66	Red	1.5	1.5	1.5	1.5
67	Red	1.5	1.5	1.5	1.5
68	Red	1.5	1.5	1.5	1.5
69	Red	1.5	1.5	1.5	1.5
70	Red	1.5	1.5	1.5	1.5
71	Red	1.5	1.5	1.5	1.5
72	Red	1.5	1.5	1.5	1.5
73	Red	1.5	1.5	1.5	1.5
74	Red	1.5	1.5	1.5	1.5
75	Red	1.5	1.5	1.5	1.5
76	Red	1.5	1.5	1.5	1.5
77	Red	1.5	1.5	1.5	1.5
78	Red	1.5	1.5	1.5	1.5
79	Red	1.5	1.5	1.5	1.5
80	Red	1.5	1.5	1.5	1.5
81	Red	1.5	1.5	1.5	1.5
82	Red	1.5	1.5	1.5	1.5
83	Red	1.5	1.5	1.5	1.5
84	Red	1.5	1.5	1.5	1.5
85	Red	1.5	1.5	1.5	1.5
86	Red	1.5	1.5	1.5	1.5
87	Red	1.5	1.5	1.5	1.5
88	Red	1.5	1.5	1.5	1.5
89	Red	1.5	1.5	1.5	1.5
90	Red	1.5	1.5	1.5	1.5
91	Red	1.5	1.5	1.5	1.5
92	Red	1.5	1.5	1.5	1.5
93	Red	1.5	1.5	1.5	1.5
94	Red	1.5	1.5	1.5	1.5
95	Red	1.5	1.5	1.5	1.5
96	Red	1.5	1.5	1.5	1.5
97	Red	1.5	1.5	1.5	1.5
98	Red	1.5	1.5	1.5	1.5
99	Red	1.5	1.5	1.5	1.5
100	Red	1.5	1.5	1.5	1.5

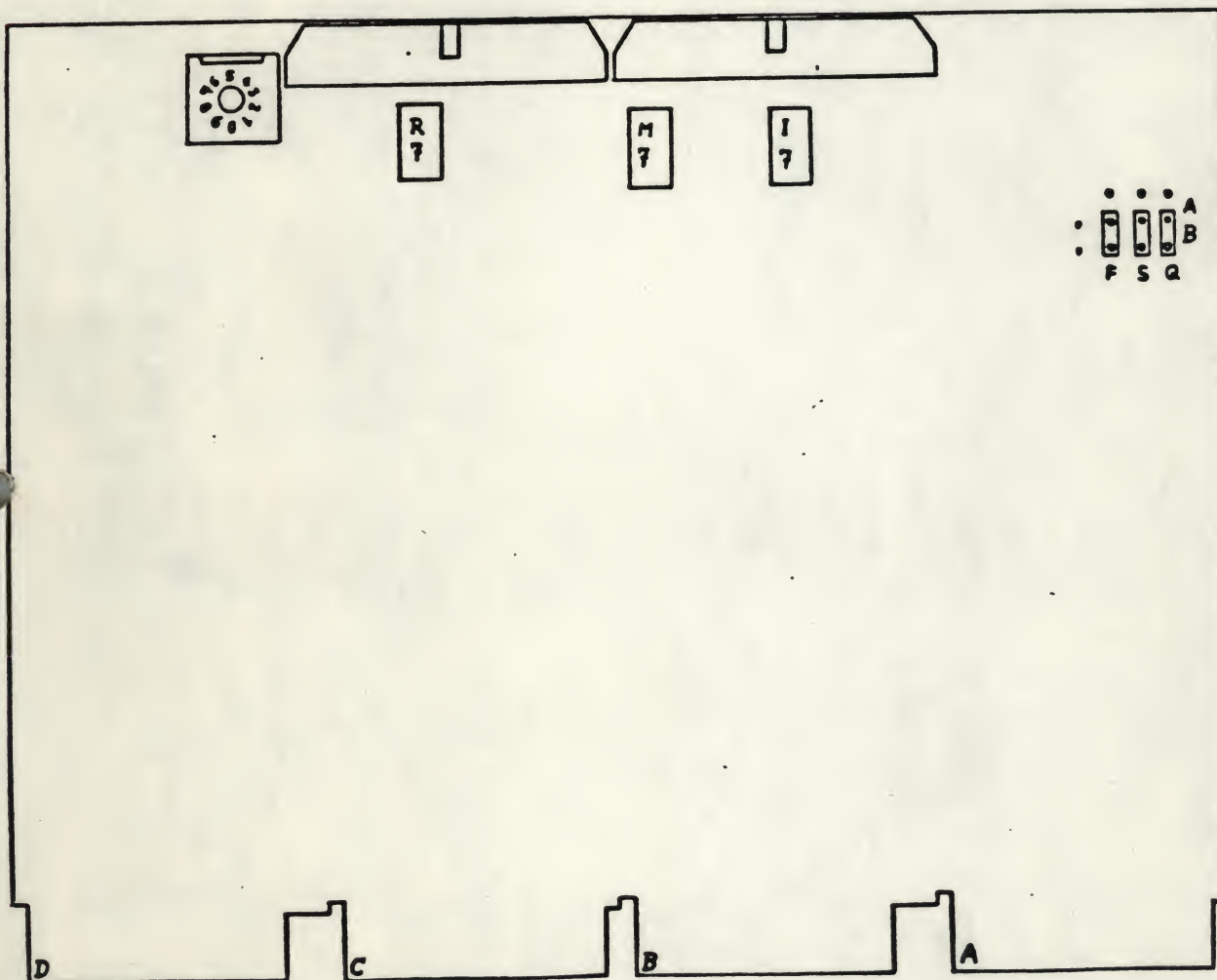
ADRESS-SCHALTER

Schalterstellung	Speicherbereich
0	\$000000 - \$07FFFF
1	\$080000 - \$0FFFFFFF
2	\$100000 - \$17FFFF
3	\$180000 - \$1FFFFFFF
4	\$200000 - \$27FFFF
5	\$280000 - \$2FFFFFFF
6	\$300000 - \$37FFFF
7	\$380000 - \$3FFFFFFF
8	nicht selektiert
9	nicht selektiert

PARITY-JUMPER

Jumper Stellung		
F	●	Force-Parity-Error disable
F	B	Force Parity-Error enable
S	A	S-Parity disable
S	●	S-Parity enable
Q	A	Q-Parity disable
Q	●	Q-Parity enable

● - Standard



ADDRESS RANGE	J9	J10	J11	J12
0K-128K	0	0	0	0
128K-256K	0	0	0	0
256K-384K	0	1	0	0
384K-512K	1	1	0	0
512K-640K	0	0	1	0
640K-768K	1	0	1	0
768K-896K	0	1	1	0
896K-1024K	1	1	1	0
1024K-1152K	0	0	0	1
1152K-1280K	1	0	0	1
1280K-1408K	0	1	0	1
1408K-1536K	1	1	0	1
1536K-1664K	0	0	1	1
1664K-1792K	1	0	1	1
1792K-1920K	0	1	1	1
1920K-2048K	1	1	1	1

K = K Word

Address Range Selection

Table 3-2

U = Removed

I = Installed


* Non Extended Address

** Extended Address Option
J24 removed
J23 installed

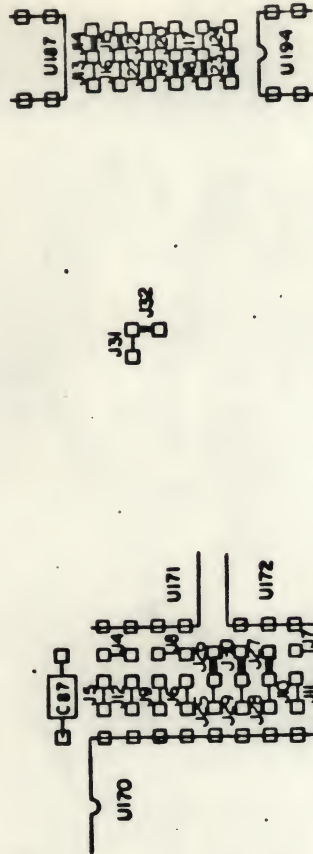
	J23	J24
Extended Address	I	R
Non Extended Address	I	I

Table 3-3

Jumper 23 Installed

 National Semiconductor Corporation 2900 Semiconductor Drive, Santa Clara, Calif. 95051	SIZE	DWG. NO.	REV.
	A	409109459-001	A
	SCALE	SHEET	OF
		27	27

4230007

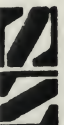


VIEW A

VIEW C

VIEW B

Jumper Locations
Figure 3-2

 National Semiconductor Corporation 2900 Semiconductor Drive, Santa Clara, Calif. 95051	SIZE	DWG. NO.	REV.
	A	409109459-001	A
	SCALE	SHEET	OF
		25	25

4230007

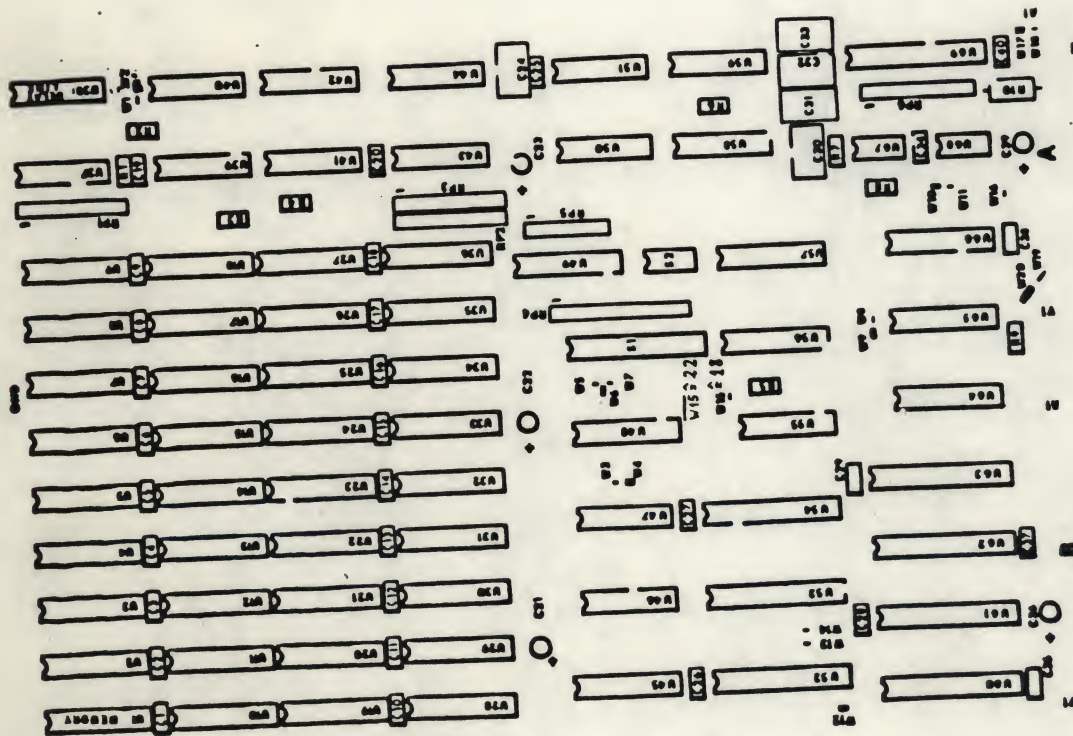


Figure 1.1 Jumper and Switch Placement

ADDRESS RANGE	S1-9	S1-8	S1-7	S1-6
0K-128	0	0	0	0
128K-256K	0	0	0	1
256K-384K	0	0	1	0
384K-512K	0	0	1	1
512K-640K	0	1	0	0
640K-768K	0	1	0	1
768K-896K	0	1	1	0
896K-1024K	0	1	1	1
1024K-1152K	1	0	0	0
1152K-1280K	1	0	0	1
1280K-1408K	1	0	1	0
1408K-1536K	1	0	1	1
1536K-1664K	1	1	0	0
1664K-1792K	1	1	0	1
1792K-1920K	1	1	1	1
1920K-2048K	1	1	1	1

K = K Word

To use addresses above 128K, 22 bit addressing must be used. In this case, the starting address will be the sum of the address in Table 1.5 and the lower limit of the range in Table 1.6.

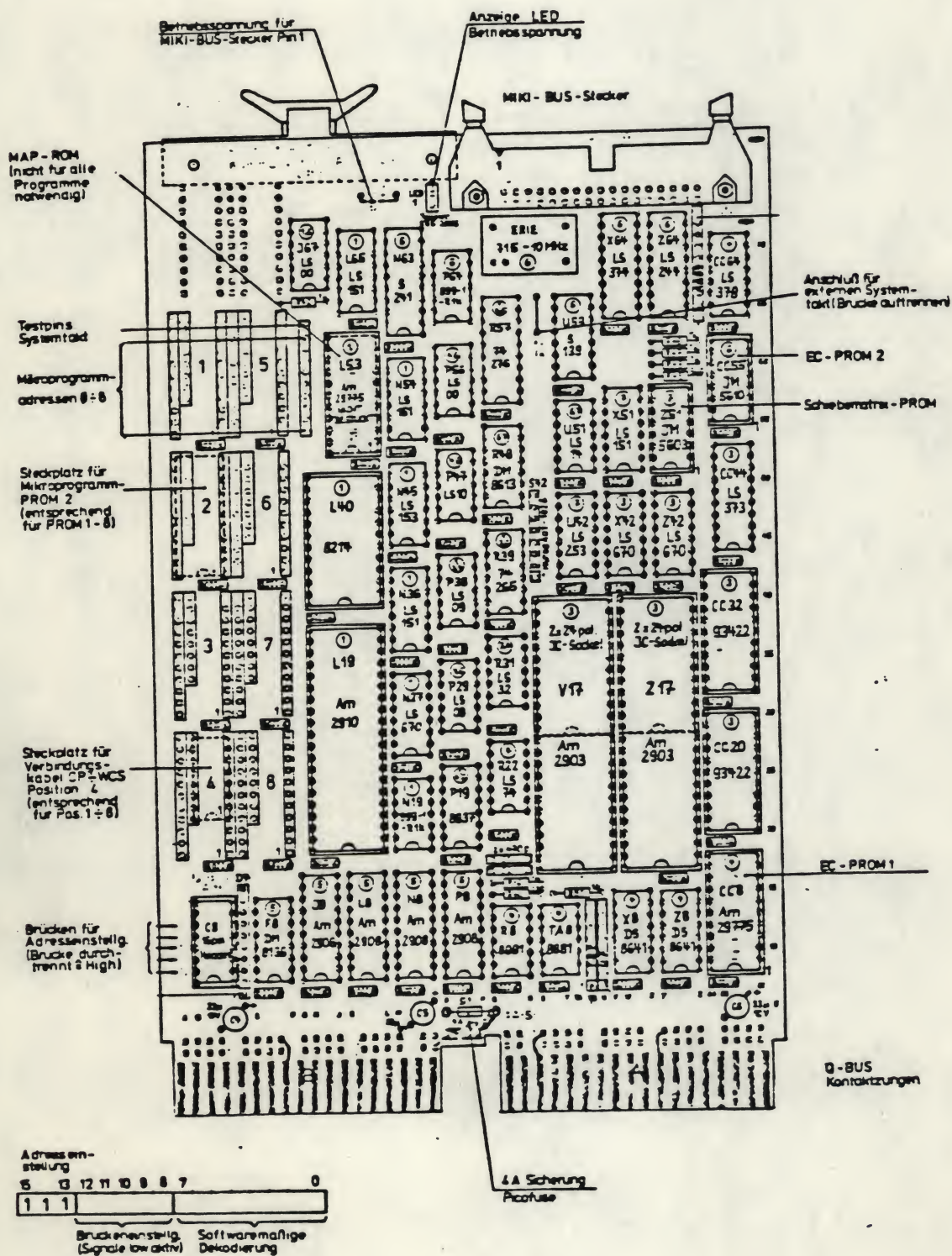
0 = OPEN (OFF)
1 = CLOSED (ON)

Table 1.5 - ADDRESS RANGE SELECTION

1/D	S1-10
SPACE	
2K 1/D	Close
4K 1/D	Open

Table 1.6 1/D Space Selection

Layout Kommunikationsprozessor CP 2 MUX-KE

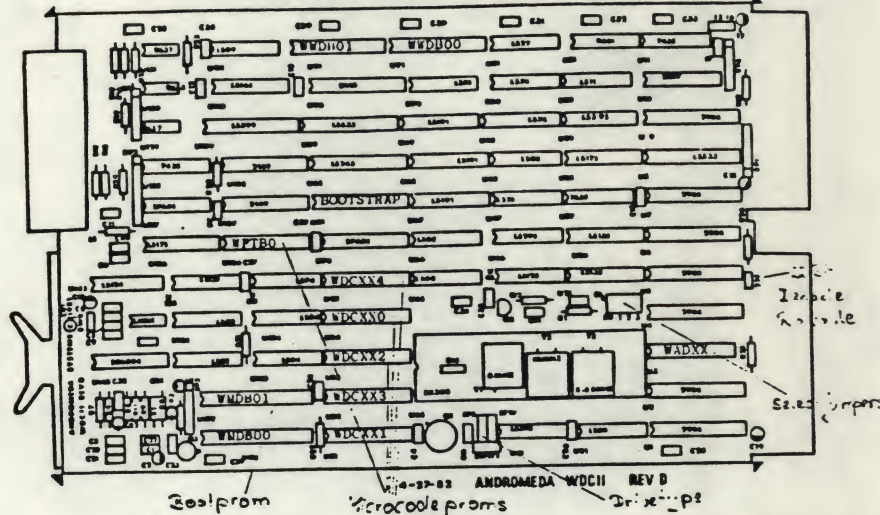


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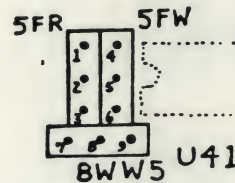
1911



Andromeda - Controller WDC 11



Drivetype:



Jumper Pair:	Pins
5FR	1-2
8FR	2-3
5FW	4-5
8FW	5-6
5WW	8-9
8WW	7-8

Bootproms:

Drivetype	Master	Bezeichnung	Promtyp
TH602, TH604	R900 420	TH603	TH603E2
TH603, TH604	R900 421	TH603	TH603E2
3AS16E, TH604	R900 422	3AS16E	3AS16E

Drive Type	Jumpers Installed
8" Winchester	8WR, 8WW
5.25" Winchester	5WW
8" Floppy	8FR, 8FW
5.25" Floppy	5FR, 5FW

Select jumpers

Microcode proms:

Drivetype	Revision level
TH603	E + F
TH603	E + F
3AS16E	F

Revision level F - Proms:

Master	Bezeichnung	Promtyp
R900 420	WDCCT 0	WDCCT 0
R900 421	WDCCT 1	WDCCT 1
R900 422	WDCCT 2	WDCCT 2
R900 423	WDCCT 3	WDCCT 3
R900 424	WDCCT 4	WDCCT 4
R900 425	WDCCT A	WDCCT A

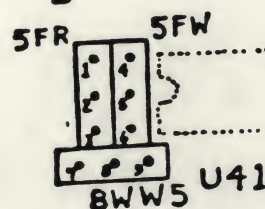
- S3: An RK05 controller with registers addressed from 777400 thru 777416, and an interrupt vector of 220 (WDC11-B), or
- an RL01/2 controller with registers addressed from 774400 thru 774416, and an interrupt vector of 160 (WDC11-C)
- S2: An RX02 controller with registers addressed from 777170 thru 777172, and an interrupt vector of 264
- S1: A bootstrap ROM, addressed from 773000 thru 773776
- S0: Four maintenance registers, addressed from 770500 thru 770506 (This jumper should NEVER be installed by the user. Writing into one of these registers may result in loss of disk data.)

Personality modules:

- WPCSW: Personality card for 5.25" Winchester drives if more than one Winchester drive is used
- WPCBW: Personality card for 8" Winchester drives
- WPCSF: Personality card for 5.25" floppy drives
- WPCBF: Personality card for 8" floppy drives

1. The first part of the document
describes the general situation
of the country and the
state of the economy.
It also mentions the
main problems that
the government is facing.
The second part of the
document discusses the
measures that the
government has taken
to solve these problems.
The third part of the
document discusses the
results of these measures.
The fourth part of the
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future of the country.

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measures that the
government has taken
to solve these problems.
The third part of the
document discusses the
results of these measures.
The fourth part of the
document discusses the
future of the country.

[illegible]

Jumper Pair:	Pins
5FR	: 1-2
8FR	: 2-3
5FW	: 4-5
8FW	: 5-6
5WK	: 8-9
8WK	: 7-8

DEV-TYP	JUMPER	DEV-Select	Interrupt-Priority
8 ^u -WD	8WR, 8WR rem	RL02/RK05	S3 inst 4
5 ^u ₄ -WD	5WR inst	RX02	S2 inst 5
8 ^u -FD	8FR, 8FR rem	B-ROM	S1 rem 6
5 ^u ₄ -FD	5FR, 5FR inst	Maint.	S0 rem 7
			I5 inst
			I6 rem
			I7 rem

Zusätzliche Brücken:

22E install

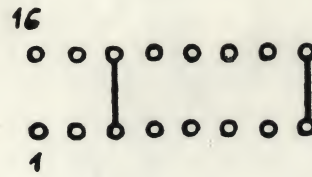
PC remove

[illegible]

Floppy - Drive TM 100 - 4 (TANDON)

5 1/4" 1MByte

- Header 1E:

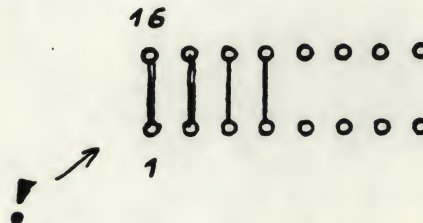


- Von der Terminierung 2F stecken die Pins 3,4,6 und 7 nicht in der Fassung !!!

Winchester - Drive TM 603 SE (TANDON)

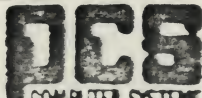
5 1/4" 14.4 MByte

- Header U21:



- Terminierung U24 steckt in der Fassung.

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				Freigeabeterminen			
				82	Tag	Name	WINCHESTER / FLOPPY - KONFIG. QU 68000 Kompaktsystem
				Beord	24.9.	W. Schulz	
				Gedr			
				1. mm			
							
Ausgabe	Aenderung	Tag	Name				

Diese Zeichnung ist unser Eigentum Vervielfältigung,
unbefugte Verwertung, Abtötung an andere ist!
strafbar und Schadensersatzpflichtig

S.O.# 1/ Customer . / . Date Shipped 1/

Device Select:	S0	<u>R</u>	Maintenance Registers
	S1	<u>R</u>	Bootstrap ROM
	S2	<u>I</u>	Floppy Disk Controller
	S3	<u>I</u>	Winchester Disk Controller
Interrupt Level:	I5	<u>I</u>	Interrupt level 5
	I6	<u>R</u>	Interrupt level 6 or 7
	I7	<u>R</u>	Interrupt level 7

Winchester:	8WR, 8WW	<u>R</u>	8" Winchester Controller
		<u>I</u>	5.25" Winchester Controller
Floppy:	8FR, 8FW	<u>R</u>	8" Floppy Controller
		<u>I</u>	5.25" Floppy Controller

Part No:	Function	Installed type
	Address Recognition	WAD <u>CFI</u>
	Bootstrap ROM	W <u>CC 2P2F</u>
	Microcode	WDC <u>CC R-Y</u>

[illegible]

Page 1 of 1

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TANDON - Winchester drive TM 503 (3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 83

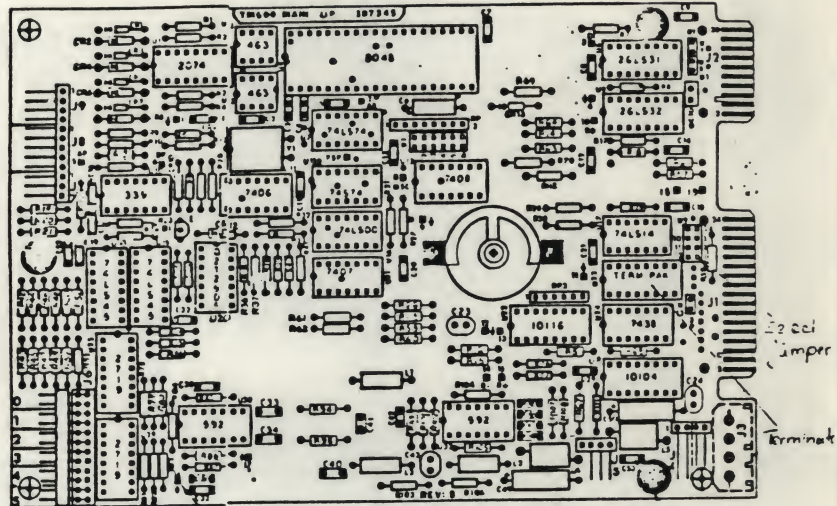


TABLE 3-3
OPTION PROGRAMMING GUIDE

W1-W3 Jumper	Function	Factory Programmed	Usage
W1	Track Fault	0	Install for excess track fault.
W2	Test	0	Install for factory test.
W3	Disable Limit	0	Install to disable soft limits.
W4	Spin Select	0	Install for spin select.
W5	Tracks	8	Install for standard version only.
W6	Motor Type	—	Install for Type 1.8" motor.
RTW7	Read Terminator	1	Close only at end drive of daisy chain data. Closed for radial data.
RTW8	Write Terminator	1	
S4W9 S3W10 S2W11 S1W12	Drive Select 4 Drive Select 3 Drive Select 2 Drive Select 1	0 0 0 1	Install one of four plugs only. Plug corresponds to drive address.
1PW13 UT2	Three Disk Terminator Pack	303 1	Close for Model TM303 only. Install in end drive of daisy chain.

TABLE

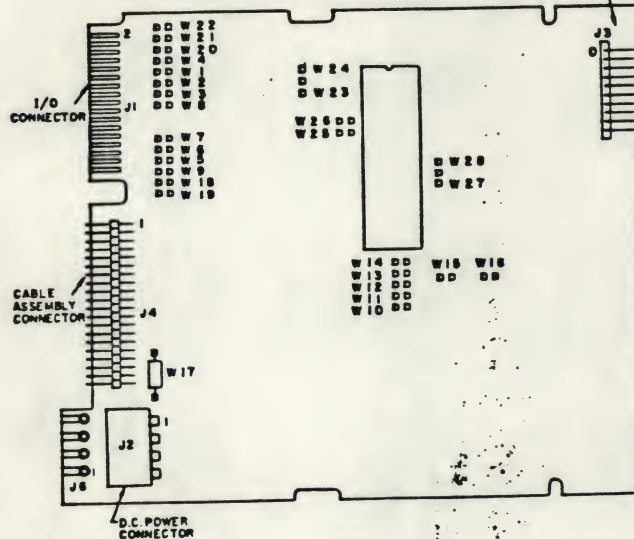
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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TANDON - 797:10100rk

R/W HEAD CONNECTOR

TNAD-4 (222.02)



MOTOR ON (W12)

The standard operation has a Motor On signal controlling the drive motor. W12 is deleted.

The motor can be controlled by Drive Select or Motor On when W12 is installed.

W12*	MOTOR IS ENABLED BY
—	Motor On.
X	Motor On or Drive Select.

STEP CONFIGURATION (W13, W14)

Optional drive configurations can be selected using W13 and W14. W13 and W14 deleted is standard.

W13*	W14*	STEP CONFIGURATION IS
—	—	For use at three millisecond step rate.
—	X	Self-Seek cycle.
X	—	For use within six millisecond or slower step rate.
X	X	Not used.

DRIVE SELECT (W1 THROUGH W4, W8, W18, W29)

Jumper blocks W1 through W4, W8, W18 and W29 control the drive unit number select. Jumper number W1 is used for Drive 0. W2 is used for Drive 1. W3 is used for Drive 2. W4 and W18 are used for optional Drive 3. W29 is used for Drive 3.

The drive is always selected when W8 is installed.

W1*	W2*	W3*	W4*	W8*	W18	W29	DRIVE SELECT
X	—	—	—	—	—	—	Selects Drive 0 via J1-10.
—	X	—	—	—	—	—	Selects Drive 1 via J1-12.
—	—	X	—	—	—	—	Selects Drive 2 via J1-14.
—	—	—	X	—	—	X	Selects Drive 3 via J1-4.
—	—	—	X	—	X	—	Selects Drive 3 via J1-34 (optional).
—	—	—	—	X	—	—	Multiplex: Used in a single drive system that does not provide drive select lines.

STEPPER MOTOR CONTROL (W15, W16)

The power to the stepper motor is controlled by Drive Select when W15 is in place. The stepper motor is enabled all the time when W16 is in place.

W15	W16	STEPPER MOTOR CONTROL OPTION
X	—	Power is available to the stepper motor only when the drive is selected. On reselection, the user must ensure track location.
—	X	Power is continuously available to the stepper motor.

SIDE SELECT (W5, W6, W7)

W5 and W6 are standard. W7 is an option; it is used alone.

W5	W6	W7	SIDE SELECT
X	X	—	For single-sided and double-sided drives.
—	—	X	Direction (J1-18 N FWD) is used for optional side select.

READY I/O (W9, W19)

Ready is output on Pin 6 only when W9 is installed. Ready is output on Pin 34 only when W19 is installed.

W9	W19	READY
X	—	Ready signal on J1-4 (optional).
—	X	Ready signal on J1-34.

READY OPTION MODES (W10, W11)

The Ready option jumper programming is defined as:

W10	W11	READY IS A FUNCTION OF
—	—	Latch closed; diskette in place; and diskette not changed or removed.
—	X	Latch closed. Does not require drive select line to be toggled to reinitiate ready line.
X	—	Latch closed; diskette in place; and diskette not changed or removed; index pulses detected; motor enabled and up to speed.
X	X	Latch closed; index pulses detected; motor enabled and up to speed. Does not require drive select line to be toggled to reinitiate ready line.

GROUND ISOLATION (W17)

The power ground is isolated from the chassis ground when W17 is removed. Ground isolation can also be accomplished by deletion of the chassis-to-PCBA ground jumper.

W17	GROUND
—	Isolates the logic ground from the chassis ground.
X	Connects the logic ground to the chassis ground. In addition, the chassis-to-PCBA ground jumper must be in.

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9. The ninth part of the report
10. The tenth part of the report



1. The first part of the report
2. The second part of the report
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9. The ninth part of the report
10. The tenth part of the report

1. The first part of the report		2. The second part of the report		3. The third part of the report	
1.1	1.1.1	2.1	2.1.1	3.1	3.1.1
1.2	1.2.1	2.2	2.2.1	3.2	3.2.1
1.3	1.3.1	2.3	2.3.1	3.3	3.3.1
1.4	1.4.1	2.4	2.4.1	3.4	3.4.1
1.5	1.5.1	2.5	2.5.1	3.5	3.5.1
1.6	1.6.1	2.6	2.6.1	3.6	3.6.1
1.7	1.7.1	2.7	2.7.1	3.7	3.7.1
1.8	1.8.1	2.8	2.8.1	3.8	3.8.1
1.9	1.9.1	2.9	2.9.1	3.9	3.9.1
1.10	1.10.1	2.10	2.10.1	3.10	3.10.1

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1.1	1.1.1	2.1	2.1.1	3.1	3.1.1
1.2	1.2.1	2.2	2.2.1	3.2	3.2.1
1.3	1.3.1	2.3	2.3.1	3.3	3.3.1
1.4	1.4.1	2.4	2.4.1	3.4	3.4.1
1.5	1.5.1	2.5	2.5.1	3.5	3.5.1
1.6	1.6.1	2.6	2.6.1	3.6	3.6.1
1.7	1.7.1	2.7	2.7.1	3.7	3.7.1
1.8	1.8.1	2.8	2.8.1	3.8	3.8.1
1.9	1.9.1	2.9	2.9.1	3.9	3.9.1
1.10	1.10.1	2.10	2.10.1	3.10	3.10.1

SPECIAL I/O J1-4 (W20, W21, W27, W28)

Diskette inserted status (output), W20 only.

"In Use" illuminates the front panel L.E.D. when the drive is selected. W21 and W27 are installed, W28 is deleted, and a true (low) signal is applied to J1, Pin 4.

W20	W21	IN USE, DISK IN
X	—	Provides "Disk In" signal to the system via J1-4.
—	X	Provides "In Use" signal from the system to the drive via J1-4.

W21	W27	W28	ACTIVITY L.E.D.
X	X	—	Activity L.E.D. function of "In Use", from the system, and Drive Select.
—	—	X	Activity L.E.D. function of Drive Select only.

ERASE TYPE (W25, W26)

W25	W26	ERASE
X	—	Erase delay used with standard tunnel erase read/write heads.
—	X	No erase delay. Straddle erase read/write heads used (optional).

DOOR LOCK SOLENOID (W22)

The door lock solenoid can be activated from J1, Pin 2, with both W22 and the optional door lock solenoid installed.

W22	DOOR LOCK SOLENOID
—	For drives with no door lock solenoid.
X	For drives with a door lock solenoid (optional).

WRITE PROTECT INHIBIT (W23, W24)

The standard Write Protect feature is W23 only. Write Protect control is inhibited when W24 is installed and W23 removed.

W23	W24	WRITE PROTECT
X	—	Write Protect control, in response to a write protected diskette, inhibits Write Gate, thus disallowing the flow of write data to the read/write heads.
—	X	Write Protect control is inhibited.

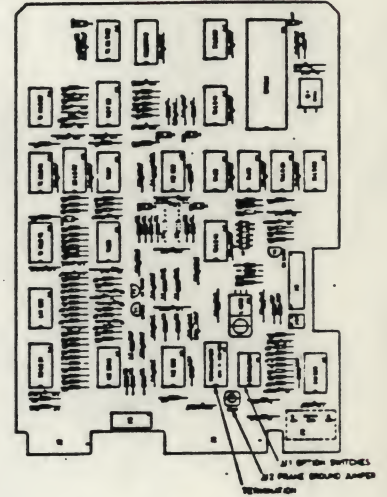
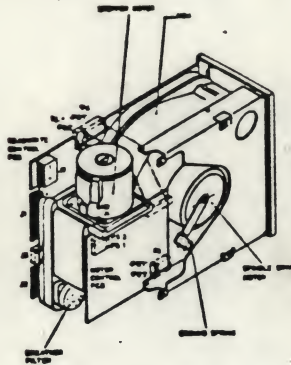
Brückenbelegung TH 101-4 im Model 210
Model 210, Model 212

W1	R	W8	R	W15	R	W22	R
W2	I	W9	R	W16	I	W23	I
W3	R	W10	R	W17	I	W24	R
W4	R	W11	I	W18	R	W25	I
W5	I	W12	R	W19	I	W26	R
W6	I	W13	R	W20	R	W27	R
W7	R	W14	R	W21	R	W28	I

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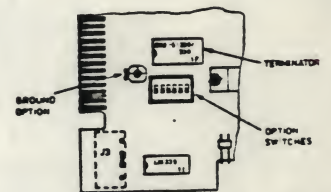
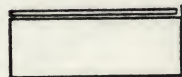
BASF - Winchester drive GAPS (B923.011)



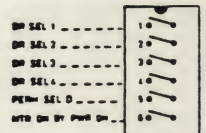
VERTICAL MOUNTING POSITION



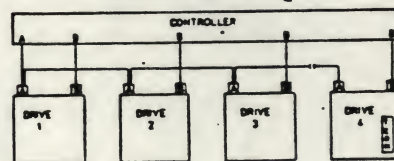
HORIZONTAL MOUNTING POSITION:
B/W-PCB on the top



Select - Switches



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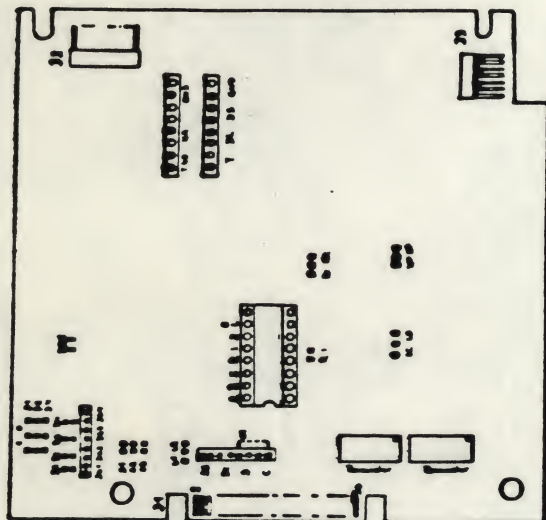
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REVISION LEISTUNGS-BELLE

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1500	981502	981504	981506	981508	981510	981512	981514	981516	981518	981520	981522	981524	981526	981528	981530	981532	981534	981536	981538	981540	981542	981544	981546	981548	981550	981552	981554	981556	981558	981560	981562	981564	981566	981568	981570	981572	981574	981576	981578	981580	981582	981584	981586	981588	981590	981592	981594	981596	981598	981600	981602	981604	981606	981608	981610	981612	981614	981616	981618	981620	981622	981624	981626	981628	981630	981632	981634	981636	981638	981640	981642	981644	981646	981648	981650	981652	981654	981656	981658	981660	981662	981664	981666	981668	981670	981672	981674	981676	981678	981680	981682	981684	981686	981688	981690	981692	981694	981696	981698	981700	981702	981704	981706	981708	981710	981712	981714	981716	981718	981720	981722	981724	981726	981728	981730	981732	981734	981736	981738	981740	981742	981744	981746	981748	981750	981752	981754	981756	981758	981760	981762	981764	981766	981768	981770	981772	981774	981776	981778	981780	981782	981784	981786	981788	981790	981792	981794	981796	981798	981800	981802	981804	981806	981808	981810	981812	981814	981816	981818	981820	981822	981824	981826	981828	981830	981832	981834	981836	981838	981840	981842	981844	981846	981848	981850	981852	981854	981856	981858	981860	981862	981864	981866	981868	981870	981872	981874	981876	981878	981880	981882	981884	981886	981888	981890	981892	981894	981896	981898	981900	981902	981904	981906	981908	981910	981912	981914	981916	981918	981920	981922	981924	981926	981928	981930	981932	981934	981936	981938	981940	981942	981944	981946	981948	981950	981952	981954	981956	981958	981960	981962	981964	981966	981968	981970	981972	981974	981976	981978	981980	981982	981984	981986	981988	981990	981992	981994	981996	981998	982000	982002	982004	982006	982008	982010	982012	982014	982016	982018	982020	982022	982024	982026	982028	982030	982032	982034	982036	982038	982040	982042	982044	982046	982048	982050	982052	982054	982056	982058	982060	982062	982064	982066	982068	982070	982072	982074	982076	982078	982080	982082	982084	982086	982088	982090	982092	982094	982096	982098	982100	982102	982104	982106	982108	982110	982112	982114	982116	982118	982120	982122	982124	982126	982128	982130	982132	982134	982136	982138	982140	982142	982144	982146	982148	982150	982152	982154	982156	982158	982160	982162	982164	982166	982168	982170	982172	982174	982176	982178	982180	982182	982184	982186	982188	982190	982192	982194	982196	982198	982200	982202	982204	982206	982208	982210	982212	982214	982216	982218	982220	982222	982224	982226	982228	982230	982232	982234	982236	982238	982240	982242	982244	982246	982248	982250	982252	982254	982256	982258	982260	982262	982264	982266	982268	982270	982272	982274	982276	982278	982280	982282	982284	982286	982288	982290	982292	982294	982296	982298	982300	982302	982304	982306
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#1 Brücke zwischen D und C wie in Zeichnung oben
 #2 siehe Anweisung 800.

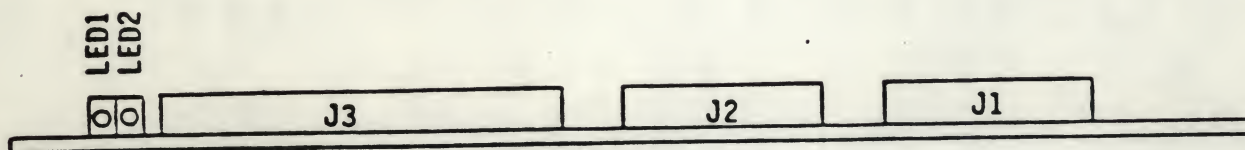
Drive Einstelltabelle für YE-DATA : YD-174 B 923.000 .3 8" FLOPPY	
Name: Datum: Unterschrift: PC8	Anweisung: Tag: Monat: Jahr:

Nun JWP	Controller ASD		Controller A	Controller PCS		Controller
	Drive 0	Drive 1	Drive 0	Drive 0	Drive 1	Drive 0
D01	-	-	-	-	-	-
D02	-	-	-	-	-	-
D03	-	-	-	-	-	-
D04	-	-	-	-	-	-
D05	-	-	-	-	-	-
D06	-	-	-	-	-	-
D07	-	-	-	-	-	-
D08	-	-	-	-	-	-
D09	-	-	-	-	-	-
D10	-	-	-	-	-	-
D11	-	-	-	-	-	-
D12	-	-	-	-	-	-
D13	-	-	-	-	-	-
D14	-	-	-	-	-	-
D15	-	-	-	-	-	-
D16	-	-	-	-	-	-
D17	-	-	-	-	-	-
D18	-	-	-	-	-	-
D19	-	-	-	-	-	-
D20	-	-	-	-	-	-
D21	-	-	-	-	-	-
D22	-	-	-	-	-	-
D23	-	-	-	-	-	-
D24	-	-	-	-	-	-
D25	-	-	-	-	-	-
D26	-	-	-	-	-	-
D27	-	-	-	-	-	-
D28	-	-	-	-	-	-
D29	-	-	-	-	-	-
D30	-	-	-	-	-	-
D31	-	-	-	-	-	-
D32	-	-	-	-	-	-
D33	-	-	-	-	-	-
D34	-	-	-	-	-	-
D35	-	-	-	-	-	-
D36	-	-	-	-	-	-
D37	-	-	-	-	-	-
D38	-	-	-	-	-	-
D39	-	-	-	-	-	-
D40	-	-	-	-	-	-
D41	-	-	-	-	-	-
D42	-	-	-	-	-	-
D43	-	-	-	-	-	-
D44	-	-	-	-	-	-
D45	-	-	-	-	-	-
D46	-	-	-	-	-	-
D47	-	-	-	-	-	-
D48	-	-	-	-	-	-
D49	-	-	-	-	-	-
D50	-	-	-	-	-	-
D51	-	-	-	-	-	-
D52	-	-	-	-	-	-
D53	-	-	-	-	-	-
D54	-	-	-	-	-	-
D55	-	-	-	-	-	-
D56	-	-	-	-	-	-
D57	-	-	-	-	-	-
D58	-	-	-	-	-	-
D59	-	-	-	-	-	-
D60	-	-	-	-	-	-
D61	-	-	-	-	-	-
D62	-	-	-	-	-	-
D63	-	-	-	-	-	-
D64	-	-	-	-	-	-
D65	-	-	-	-	-	-
D66	-	-	-	-	-	-
D67	-	-	-	-	-	-
D68	-	-	-	-	-	-
D69	-	-	-	-	-	-
D70	-	-	-	-	-	-
D71	-	-	-	-	-	-
D72	-	-	-	-	-	-
D73	-	-	-	-	-	-
D74	-	-	-	-	-	-
D75	-	-	-	-	-	-
D76	-	-	-	-	-	-
D77	-	-	-	-	-	-
D78	-	-	-	-	-	-
D79	-	-	-	-	-	-
D80	-	-	-	-	-	-
D81	-	-	-	-	-	-
D82	-	-	-	-	-	-
D83	-	-	-	-	-	-
D84	-	-	-	-	-	-
D85	-	-	-	-	-	-
D86	-	-	-	-	-	-
D87	-	-	-	-	-	-
D88	-	-	-	-	-	-
D89	-	-	-	-	-	-
D90	-	-	-	-	-	-
D91	-	-	-	-	-	-
D92	-	-	-	-	-	-
D93	-	-	-	-	-	-
D94	-	-	-	-	-	-
D95	-	-	-	-	-	-
D96	-	-	-	-	-	-
D97	-	-	-	-	-	-
D98	-	-	-	-	-	-
D99	-	-	-	-	-	-
D100	-	-	-	-	-	-

Befehlskennung:
 Entfernt ☐
 Installiert ☐

TABLE 5.1
ACTIVITY DISPLAY DATARAM (TM)

OPERATION	RESULTING DISPLAY	
	LED1	LED2
Write Headers	ON	OFF
Write Data	ON	OFF
Read Headers	OFF	ON
Read Data	OFF	ON
Write Check	ON	ON

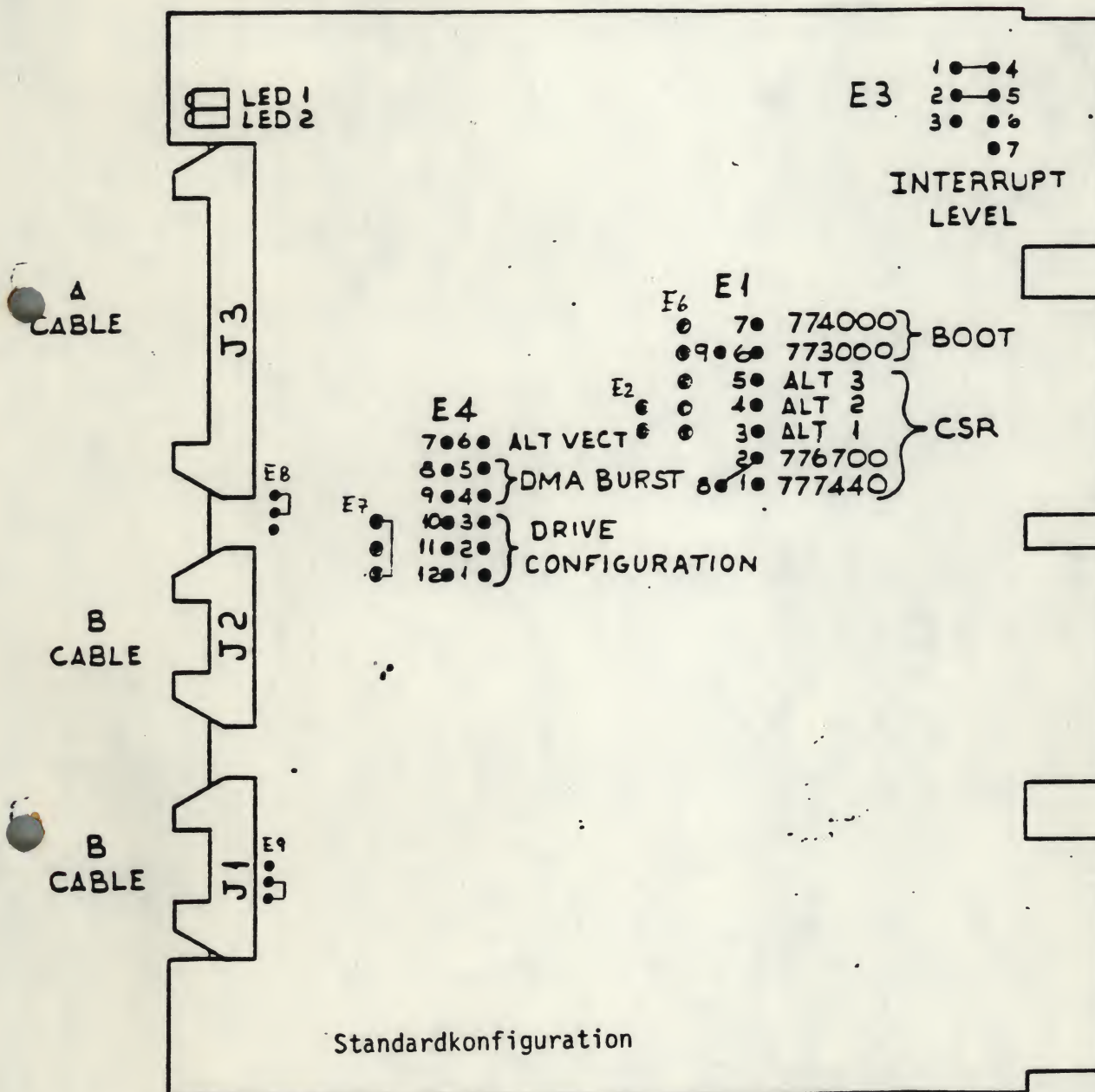


1967 03/05/67 10:45 AM

APPROXIMATE

24	100	
25	100	1000000
26	100	1000000
27	100	1000000
28	100	1000000

1000000



CONFIGURATION JUMPER POINTS

FIGURE 5.2

5.6 Vector, Bus Address Options (Refer to Figure 5.2)

5.6.1 Vector Address

The standard RH11 Interrupt Vector is 254g. This vector is implemented with jumper E4-6 to E4-7 removed. The alternate vector is 210g and is implemented by installing jumper at E4-6 to E4-7. * ✓

5.6.2 Q-BUS Address

The standard RH11 Bus Address for CS1 is 776700g and is implemented by installing jumper E1-2 to E1-8. The alternate address of CS1 is 777440g and is selected by removing E1-2 to E1-8 and installing E1-1 to E1-8. Three other alternate addresses can be implemented with revisions to PROM in location F4 and jumpers E1-3 thru 5 with E1-8. * ✓

5.6.3 Priority Interrupt Level Option

The standard priority level for the S04/D is level 5. The priority may be changed to other levels by jumpers. Remove all E3 jumpers, then install jumpers according to the chart below. *

	Add Jumper
Priority 4	E3-2 to E3-4 E3-3 to E3-5
✓ * Priority 5	E3-1 to E3-4 E3-2 to E3-5
Priority 6	E3-1 to E3-5 E3-3 to E3-7
Priority 7	E3-1 to E3-5 E3-6 to E3-7

5.7 Bootstrap Address Options

On board bootstrap may be selected at either of two addresses or disabled as shown below:

- o To boot from 773000g install E1-6 to E1-9.
- o To boot from 774000g install E1-7 to E1-9.
- ✓ * o For no bootstrap, remove all jumpers from E1-7, 8, and 9.

1. The first part of the report is devoted to a general description of the project and its objectives.

2. The second part of the report describes the methodology used in the study.

The third part of the report presents the results of the study, which are discussed in detail in the following sections. The fourth part of the report discusses the conclusions of the study and the implications of the findings.

3. The third part of the report presents the results of the study, which are discussed in detail in the following sections.

The fourth part of the report discusses the conclusions of the study and the implications of the findings. The fifth part of the report discusses the limitations of the study and the need for further research. The sixth part of the report discusses the contributions of the study to the field of research.

4. The fifth part of the report discusses the limitations of the study and the need for further research.

The sixth part of the report discusses the contributions of the study to the field of research. The seventh part of the report discusses the future research agenda and the potential for further studies.

Table 1

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Value	100	110	120	130	140	150	160	170	180	190	200

Table 2

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Value	200	210	220	230	240	250	260	270	280	290	300

5. The sixth part of the report discusses the future research agenda and the potential for further studies.

The seventh part of the report discusses the contributions of the study to the field of research. The eighth part of the report discusses the future research agenda and the potential for further studies. The ninth part of the report discusses the contributions of the study to the field of research. The tenth part of the report discusses the future research agenda and the potential for further studies.

5.8 Configuration Jumpers

The S04/A and S04/A1 controllers each support seven possible combinations of drives, as listed below. Any of the seven combinations may be selected with jumpers.

5.8.1 S04/A Drive Combinations

<u>Physical & Logical Unit or Plug Number</u>		<u>Physical Drive Type</u>	<u>Logical Drive Type</u>	<u>Jumper E4 Pins</u>		
				<u>10-3</u>	<u>11-2</u>	<u>12-1</u>
✓*	0	Fujitsu*	RM02	OUT	OUT	OUT
	1	Fujitsu*	RM02			
	0	Fujitsu*	RM02	OUT	IN	OUT
	1	80MB SMD	RM02			
	0	300MB SMD	RM05	IN	IN	OUT
	1	80MB SMD	RM02			
*	0	80MB SMD	RM02	OUT	OUT	IN
	1	Fujitsu*	RM02			
	0	80MB SMD	RM02	OUT	IN	IN
	1	80MB SMD	RM02			
	0	80MB SMD	RM02	IN	OUT	IN
	1	300MB SMD	RM05			
	0	300MB SMD	RM05	IN	OUT	OUT
	1	300MB SMD	RM05			

*Fujitsu Model M2312K84MB Mini-Winchester

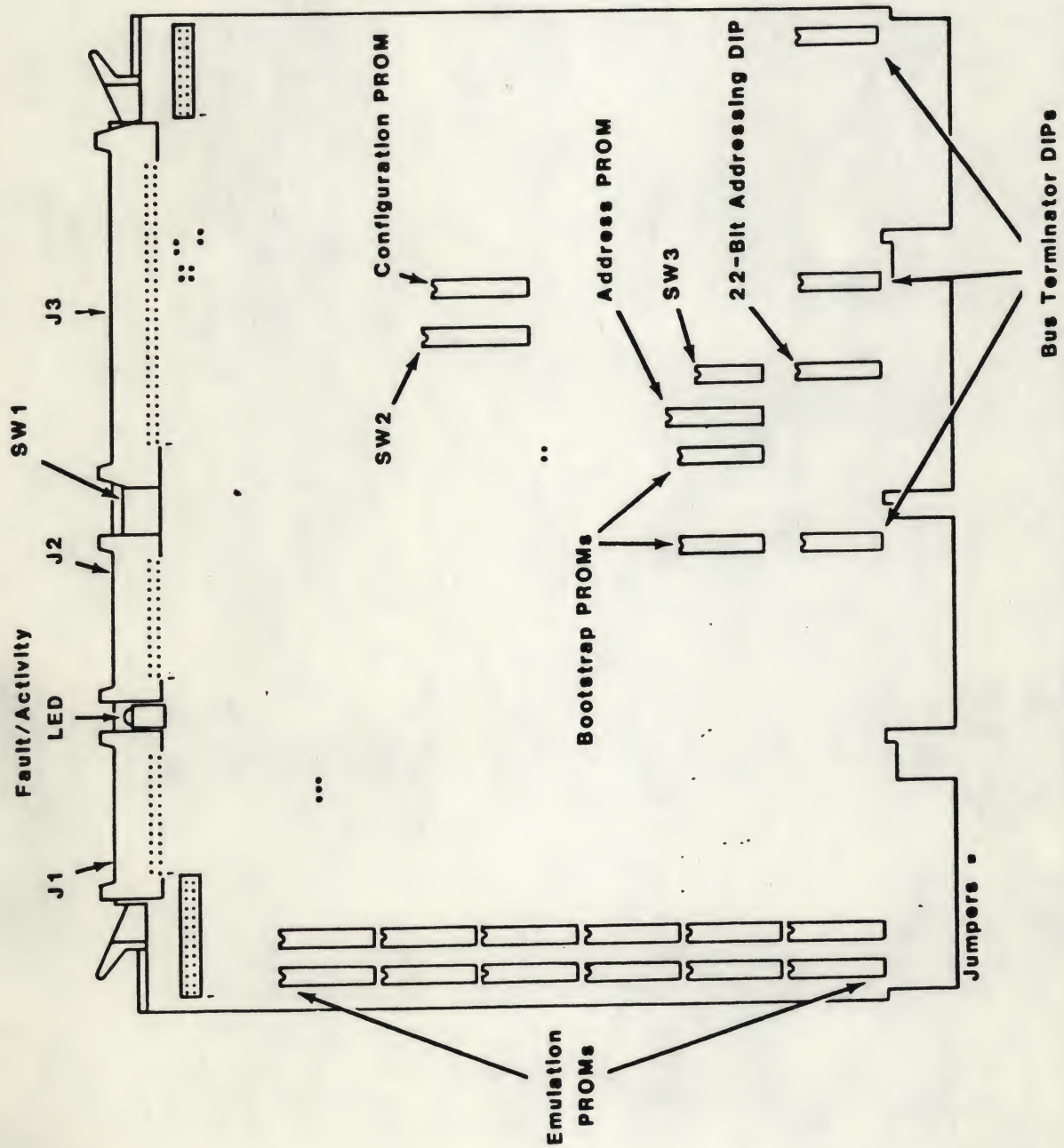


Figure 3-1 SC02 Controller Assembly Emulex (hk)

1000 - 10000



A.3 USER SELECTABLE OPTIONS

Several other options including the register starting address for the SC02/C can be user selected. The functions of the switches that select those options are defined in Tables A-4, A-5 and A-6, below.

TABLE A-3
FACTORY SWITCH SETTINGS

Switch	Setting	Switch	Setting	Switch	Setting
SW1-1	OFF	SW2-1	OFF	SW3-1	OFF
SW1-2	OFF	SW2-2	OFF	SW3-2	ON
SW1-3	OFF	SW2-3	OFF	SW3-3	OFF
SW1-4	OFF	SW2-4	OFF	SW3-4	OFF
		SW2-5	OFF	SW3-5	OFF
		SW2-6	OFF	SW3-6	OFF
		SW2-7	OFF		
		SW2-8	OFF		
		SW2-9	ON		
		SW2-10	ON		

These switch settings provide for an interrupt vector address of 210 and a standard Unibus address of 17777440.

TABLE A-4
OPTION SWITCH SETTINGS

Option Sw	Open	Closed	Function
SW1-1	Run	Halt-Reset	Controller Run/Halt-Reset
SW1-2			Not used ¹
SW1-3	Disable	Enable	Header check error to be bad sector
SW1-4	Disable	Enable	Drives to be write-locked on power-up

¹ All unused switches MUST BE OFF.

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ANALYSIS		CALCULATED	
Found	Calcd	Found	Calcd
10.00	10.00	10.00	10.00
20.00	20.00	20.00	20.00
30.00	30.00	30.00	30.00
40.00	40.00	40.00	40.00
50.00	50.00	50.00	50.00
60.00	60.00	60.00	60.00
70.00	70.00	70.00	70.00
80.00	80.00	80.00	80.00
90.00	90.00	90.00	90.00
100.00	100.00	100.00	100.00

ANALYSIS OF THE ABOVE SAMPLES

ANALYSIS		CALCULATED	
Found	Calcd	Found	Calcd
10.00	10.00	10.00	10.00
20.00	20.00	20.00	20.00
30.00	30.00	30.00	30.00
40.00	40.00	40.00	40.00
50.00	50.00	50.00	50.00
60.00	60.00	60.00	60.00
70.00	70.00	70.00	70.00
80.00	80.00	80.00	80.00
90.00	90.00	90.00	90.00
100.00	100.00	100.00	100.00

TABLE A-5
CONFIGURATION SWITCH SETTINGS

Config Sw	Open	Closed	Function
SW2-1			Drive Configuration ²
SW2-2			Drive Configuration ²
SW2-3			Drive Configuration ²
SW2-4			Drive Configuration ²
SW2-5			Drive Configuration ²
SW2-6			Drive Configuration ²
SW2-7	210	150	Interrupt vector address
SW2-8	Disable	Enable	Head offset capability
SW2-9			Drive Configuration ²
SW2-10			Drive Configuration ²

²See Table A-2 for settings

TABLE A-6
ADDRESS SWITCH SETTINGS

Address Sw	Open	Closed	Function
SW3-1	3:1	2:1	Sector Interlace
SW3-2		17777440	Standard Unibus Address ³
SW3-3		17776700	Alternate Unibus Address ³
SW3-4	Disable	Enable	Boot PROM Option
SW3-5	Disable	Enable	Line Clock Option
SW3-6	Disable	Enable	1k Microcode Address Range (normally open)

¹All unused switches MUST BE OFF.

³Only one address may be selected. All other address switches MUST BE OFF.

1. The first part of the report is a general introduction to the subject of the study. It discusses the importance of the problem and the objectives of the research.

2. The second part of the report is a detailed description of the methods used in the study. It includes a discussion of the experimental design, the data collection procedures, and the statistical analysis techniques.

3. The third part of the report is a presentation of the results of the study. It includes a discussion of the findings, a comparison of the results with previous research, and a conclusion about the significance of the study.

4. The fourth part of the report is a discussion of the implications of the study. It includes a discussion of the limitations of the study, the strengths of the study, and the potential for future research.

5. The fifth part of the report is a summary of the study. It includes a brief overview of the main findings and a final conclusion.

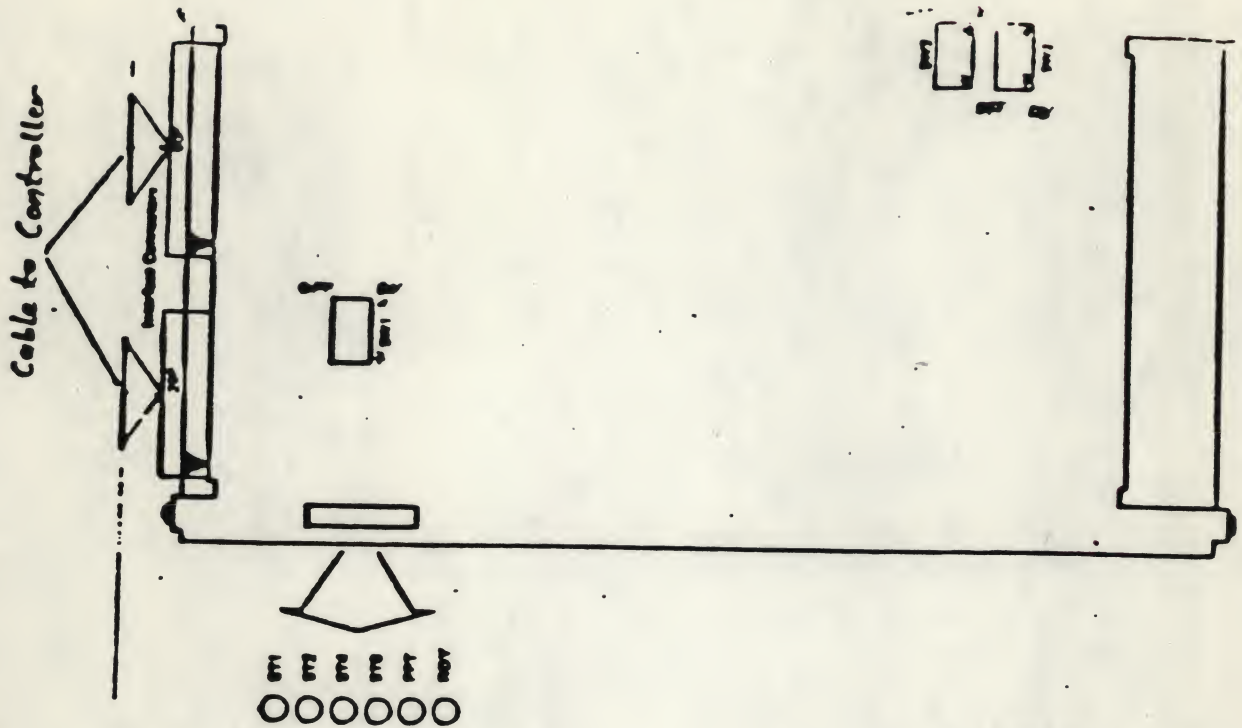
6. The sixth part of the report is a list of references. It includes a list of all the sources used in the study, including books, articles, and other documents.

7. The seventh part of the report is an appendix. It includes a list of all the data collected during the study, as well as a list of all the calculations and other information used in the analysis.

8. The eighth part of the report is a list of figures. It includes a list of all the figures used in the study, including graphs, tables, and other visual aids.

9. The ninth part of the report is a list of tables. It includes a list of all the tables used in the study, including data tables, summary tables, and other tables.

10. The tenth part of the report is a list of other information. It includes a list of all the other information used in the study, including a list of all the names of the people involved in the study, a list of all the dates, and a list of all the other relevant information.



Einstelltabelle WD-Drive M2312K (80 MByte)

Controller	PCS-Nr.	SW1							SW2							SW3						
		7	6	5	4	3	2	1	7	6	5	4	3	2	1	7	6	5	4	3	2	1
EmuLex SC02	B 922 409	0	0	0	0	0	0	0	1	0	0	0	1	1	1	0	0	0	0	1	0	0
XyLogics 552	B 922 410	0	0	0	0	0	0	0	1	1	0	1	1	0	0	0	0	0	0	1	0	0
Dataram 5004		0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	1	0	0

0 ≙ OFF

1 ≙ ON

Logische Drive n-br.

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Handwritten text at the top of the middle section, possibly a title or heading.

Handwritten header 1	Handwritten header 2	Handwritten header 3
Handwritten data 1.1	Handwritten data 1.2	Handwritten data 1.3
Handwritten data 2.1	Handwritten data 2.2	Handwritten data 2.3
Handwritten data 3.1	Handwritten data 3.2	Handwritten data 3.3

Handwritten text at the bottom of the middle section.

Handwritten header 1	Handwritten header 2	Handwritten header 3
Handwritten data 1.1	Handwritten data 1.2	Handwritten data 1.3
Handwritten data 2.1	Handwritten data 2.2	Handwritten data 2.3
Handwritten data 3.1	Handwritten data 3.2	Handwritten data 3.3

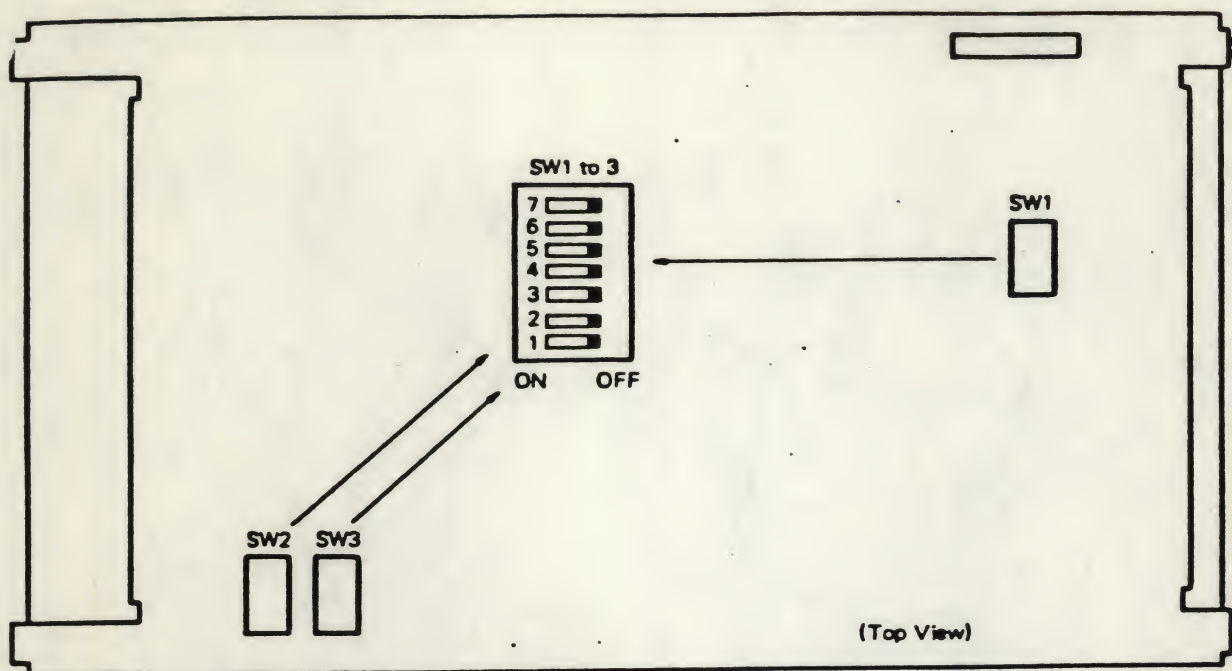


Figure 3-7-1 Mode Select Switch Location

3.7.1 Disk Addressing

Disk Logical Unit Number 0 to 7 is selected by SW1 at location E3 on the CNAM PCB assembly. Set the desired disk address with the three keys on SW1 using the binary code as shown in Table 3-7-1.

Table 3-7-1 Disk Addressing

Disk Address	Key 1	Key 2	Key 3
	2^1	2^2	2^3
0	OFF	OFF	OFF
1	ON	OFF	OFF
2	OFF	ON	OFF
3	ON	ON	OFF
4	OFF	OFF	ON
5	ON	OFF	ON
6	OFF	ON	ON
7	ON	ON	ON

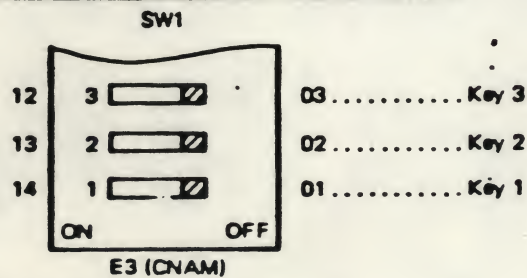


Figure 3-7-2 Disk Addressing



This diagram illustrates the layout of the room, showing the positions of the various pieces of furniture and equipment. The dimensions of the room are given as 10 feet by 12 feet. The furniture is arranged as follows:

Item	Quantity	Dimensions	Weight
Table	1	4' x 6'	150 lbs.
Chair	4	18" x 24"	20 lbs. each
Desk	1	4' x 6'	150 lbs.
Shelf	1	4' x 6'	10 lbs.
Box	1	18" x 24"	10 lbs.
Box	1	18" x 24"	10 lbs.
Box	1	18" x 24"	10 lbs.
Box	1	18" x 24"	10 lbs.



2.3.2 PCB Assembly

The unit contains fault display indicator (LED's) and File-protect switch as shown in Figure 2-3-2.

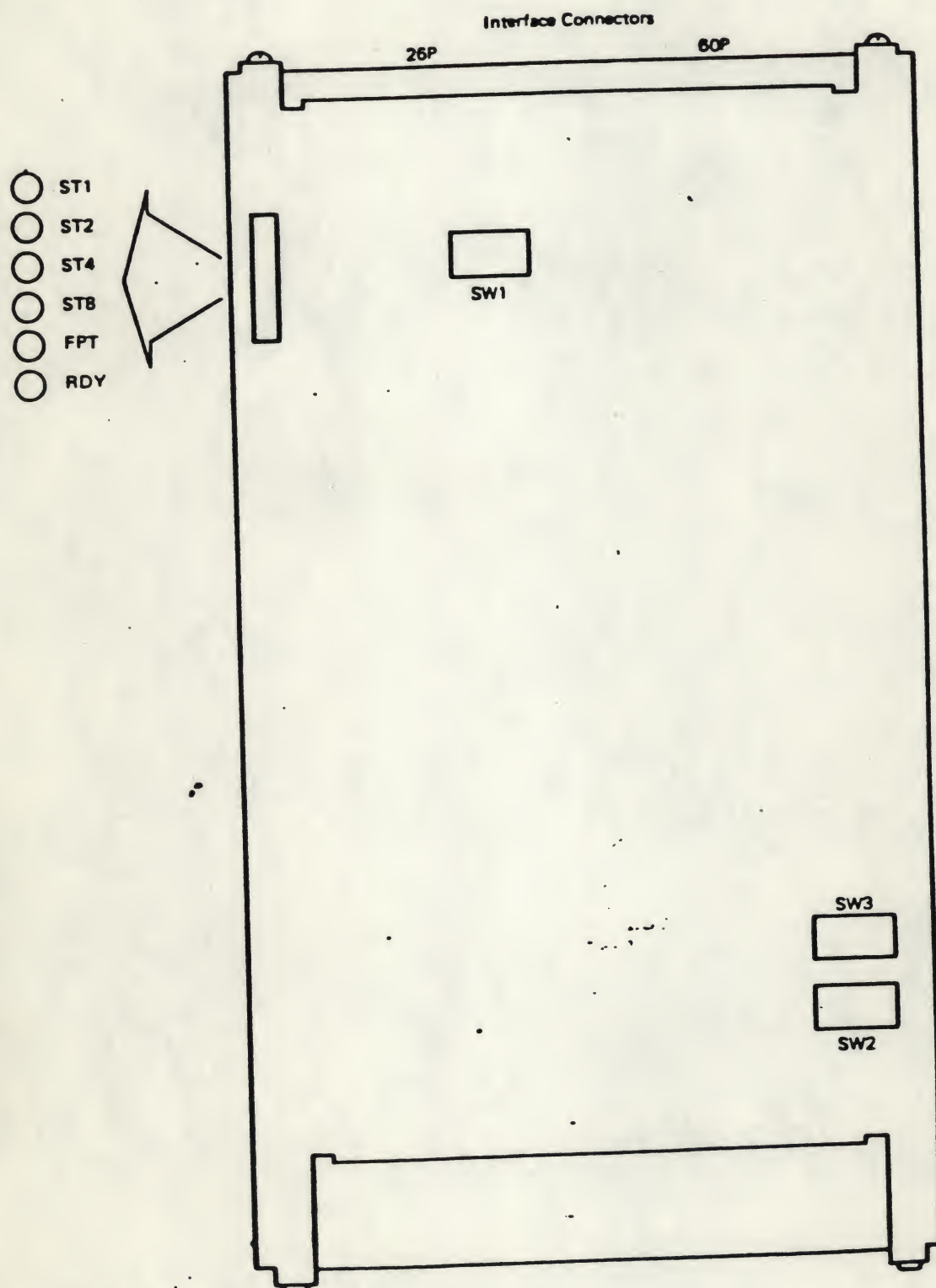


Figure 2-3-2 Fault Display Location



000000
111111
222222

- (1) FPT (File Protect) switch: SW1-Key 8
This switch inhibits the write operation. When an optional panel is installed on the drive, the switch should be in the OFF position.
- (2) RDY (Ready) indicator: Green
This RDY LED indicates that the initial seek has been performed or indicates the termination of a Seek or RTZ operation.
- (3) FPT (File Protect) indicator: Red
This LED indicates that writing is inhibited.
- (4) ST1 to ST8 (Status 1 to 8) LEDs: Red
Fifteen fault statuses are visible by binary code as shown in Table 2-3-1.

Table 2-3-1 Fault Indicator

Status Bit				Code (Hex)	Fault Status	
ST8	ST4	ST2	ST1		Fault	Description
0	0	0	1	1	DC motor failure (DMFL)	indicates spindle motor failure.
0	0	1	0	2	VCM over heat (VCMHT)	indicate VCM over-heating.
0	0	1	1	3	Initial seek time out (INTMOT)	indicates initial seek has terminated with time-out.
0	1	0	0	4	Control check 1 (CTCK1)	indicates that a Read/Write command was issued during busy status.
0	1	0	1	5	Control check 2 (CTCK2)	indicates that write gate was issued during a fault condition.
0	1	1	0	6	Read/write check 1 (RWCK1)	indicates that write gate was issued during off-track.
0	1	1	1	7	Read/write check 2 (RWCK2)	indicates that write current did not flow to the head during a Write operation.
1	0	0	0	8	Read/write check 3 (RWCK3)	indicates that write gate was issued during File-Protected status.
1	0	0	1	9	Read/write check 4 (RWCK4)	indicates that write gate was issued during a multi-head-selected status.
1	0	1	0	A	Time-out (TMOT)	indicates that seek or RTZ sequence was not terminated within 500 ms.
1	0	1	1	B	Seek guard band (SEKGB)	indicates that a guard band was detected during a direct seek operation.
1	1	0	0	C	Linear mode guard band (LNMGB)	indicates that a guard band was detected during a linear mode.
1	1	0	1	D	RTZ outer guard band (RTOGB)	indicates that an outer guard band was detected during an RTZ operation.
1	1	1	0	E	Over-shoot check (OVSHI)	indicates that the head overshoot the new cylinder address during settling time.
1	1	1	1	F	Illegal cylinder check (ILCYL)	indicates that an illegal cylinder address (>588) was issued by the controller.

2.4 POWER SUPPLY

The optional power supply may be provided with the M231XK. The front view of the power supply is shown in Figure 2-4-1.

2.4.1 Main Line Switch

This switch controls application of site AC power to the power supply. Turning on the switch applies power to an optional fan unit and DC Power to the disk drive.

2.4.2 Indicators (LEDs)

(1) Power On LED

The Power On LED indicates that AC input is applied to the power supply.

(2) Power Alarm LED

The power alarm indicates the following malfunction has occurred on the power supply:

- +5 VDC: Over-current, Over-voltage and Non-voltage
- -12 VDC: Over-current and Non-voltage
- +24 VDC: Over-current and Non-voltage
- Over heat within the power supply
- AC Output to the fan: Over-current

2.4.3 Device Alarm

The Device Alarm indicates that the terminal switch has been closed on an optional fan.

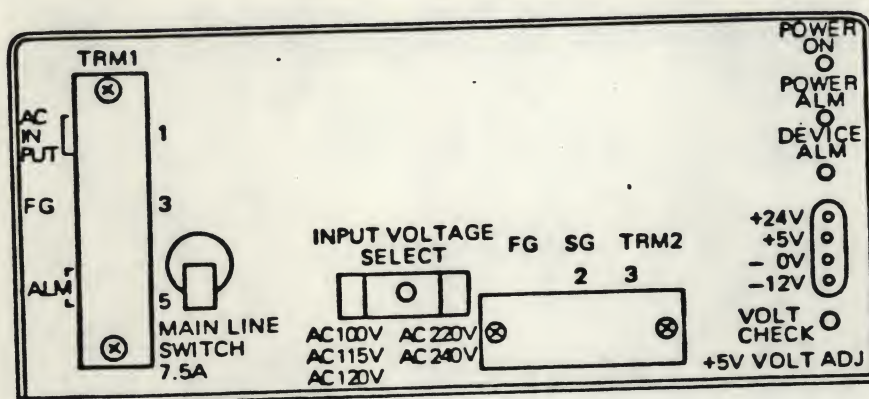


Figure 2-4-1 Front View of Power Supply

The first part of the report deals with the general situation of the country and the progress of the work. It is followed by a detailed account of the work done during the year, and a summary of the results. The report is divided into two main parts, the first of which deals with the general situation and the second with the work done during the year.



Diagram illustrating the experimental setup for the study of the effect of temperature on the rate of reaction.

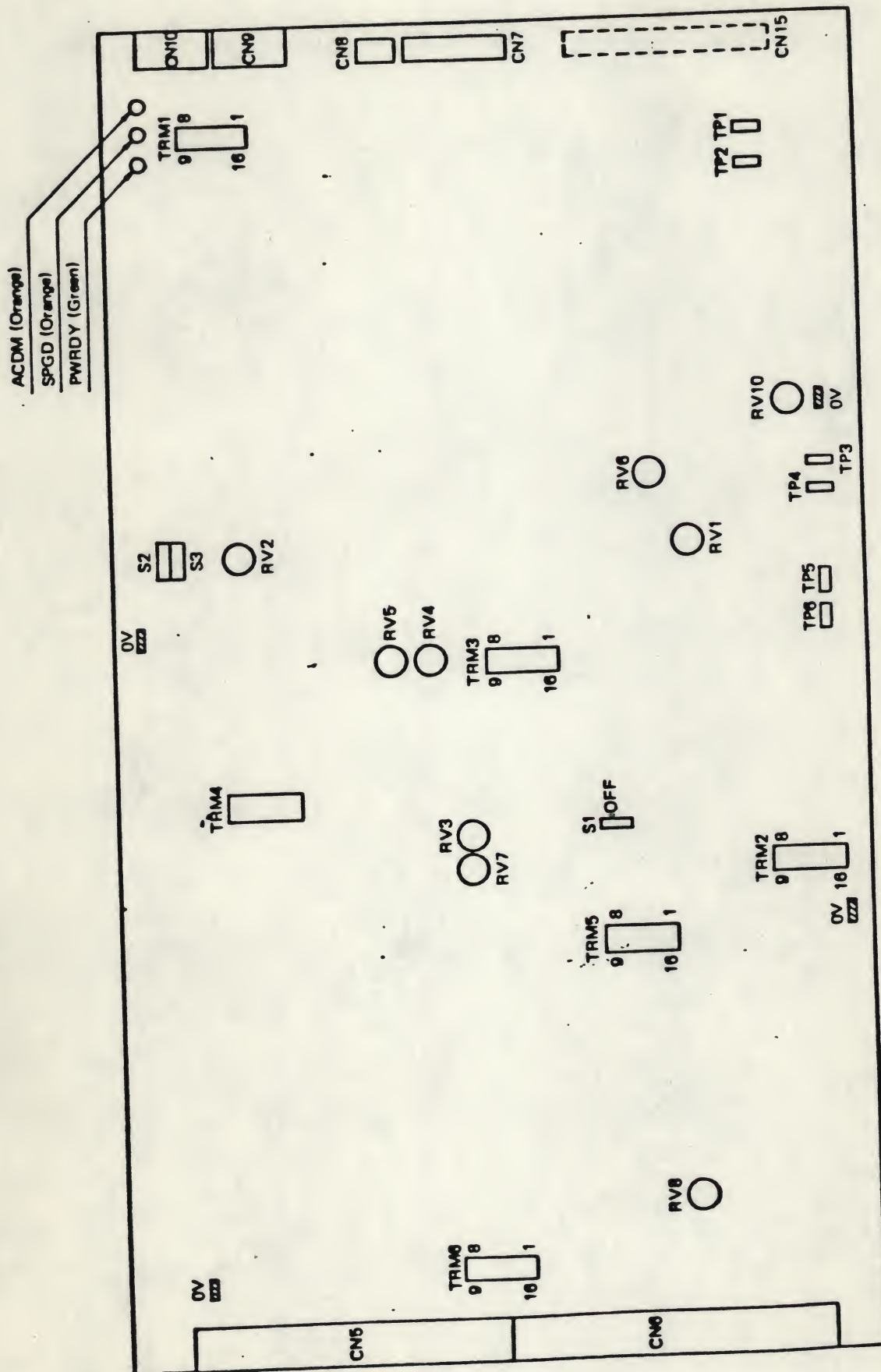


Figure 6-8-2 CMZM PCB Assembly Test Points

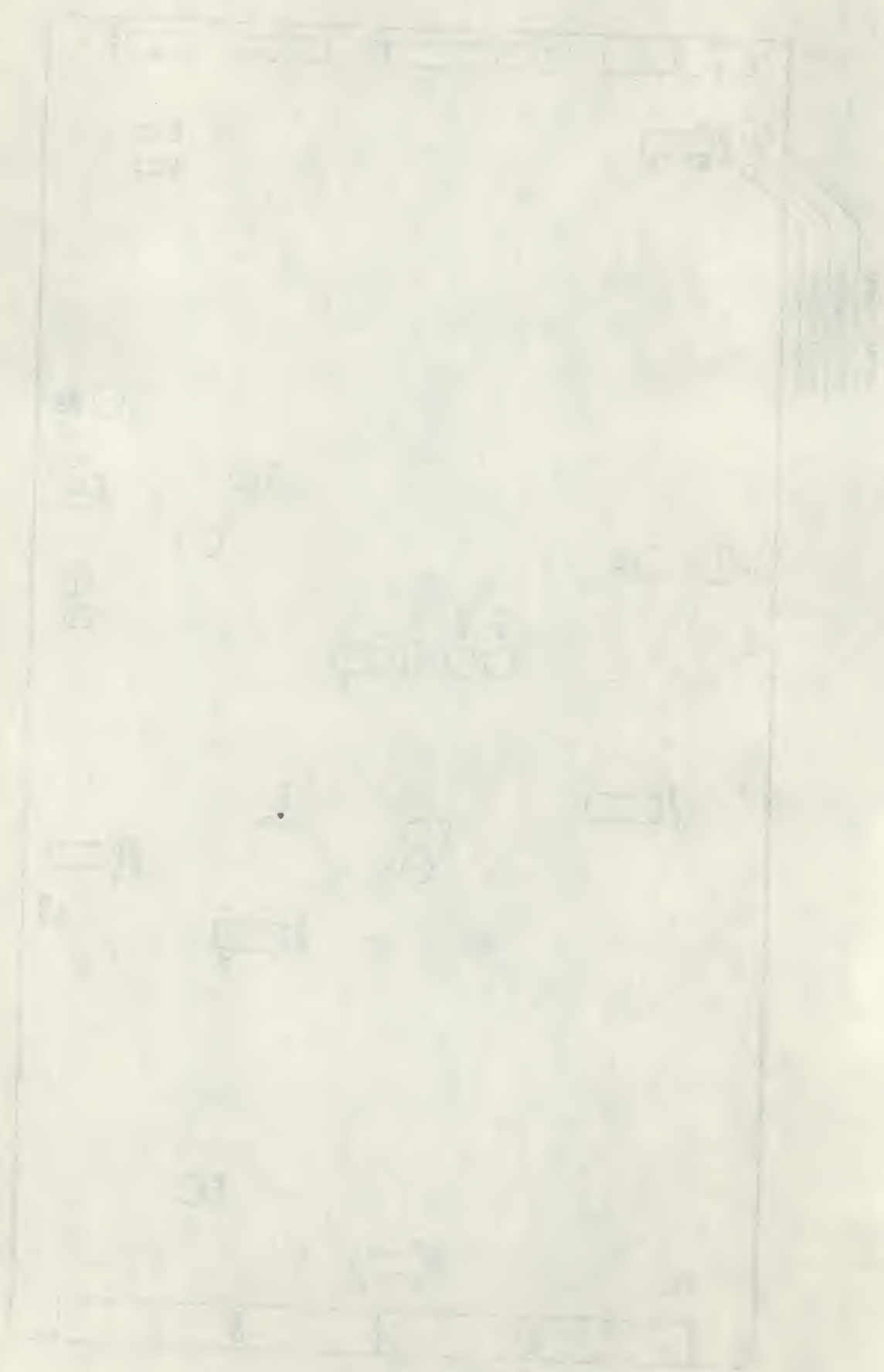


Table 6-6-3 CNAM Potentiometer Function

Pot. No.	Function/Adjustment	Reference TP
RV1	VFO Free-run Frequency	CH2/TRM9-13
2	Time-margin Measurement	CH1/CH3
3	Reference Pulse Width Adjustment	TRM10-9
4	Settling 1 (2.5 ms)	CH6

Note: No adjustment is required on any potentiometer when the CNAM PCB is replaced.

Table 6-6-4 CNAM Switch Function

No.	Function	Reference TP
SW1	Disk Addressing Device Type (when Tag 4/5 enabled) Tag 4/5 Enable Hard/Soft Sector mode File Protect	None
SW2 SW3	Sector Counting	TP23/TP24
TRM1 TRM2	Busy signal terminator	None
TRM3 TRM4	VCO (VFO) select	CH2/TRM9-13

(2) CMZM PCB assembly

The test points and potentiometers located on the CMZM PCB assembly are shown in Figure 6-6-2. Test points are listed in Table 6-6-5, potentiometers in Table 6-6-6 switches in Table 6-6-7. Three LEDs are located on the CMZM PCB assembly as follows:

ACDM (Orange): indicates that accelerate mode is activated.

SPGD (Orange): indicates that the rotational speed is within $\pm 6\%$ of the nominal value.

PWRDY (Green): indicates that +5 V, -12 V, +24 V and internal +12 V are within the nominal voltage.

Table 1. Summary of the data for the first part of the study.

Group	Mean (SD)	Range	Significance
Control	10.5 (2.1)	8.0 - 13.0	
Experimental	12.0 (2.5)	9.0 - 15.0	p < 0.05

Table 2. Summary of the data for the second part of the study.

Group	Mean (SD)	Range	Significance
Control	11.0 (2.2)	8.5 - 13.5	
Experimental	12.5 (2.6)	9.5 - 15.5	p < 0.05

The results of the study indicate that the experimental group showed significantly higher scores than the control group in both parts of the study. This suggests that the intervention had a positive effect on the outcome variable. The data for the first part of the study is presented in Table 1, and the data for the second part is presented in Table 2. The significance level for both comparisons was p < 0.05.

Änderungen V1.4/Ø3 → V1.4/Ø4

V1.4/Ø4 wird nur an Siemens ausgeliefert.

"Highlights":

- 1) sl.c, Treiber für die seriellen Schnittstellen auf dem Multi-Function-Board (MFB) wird eingebunden.
- 2) Das MFB enthält auch eine Konsolschnittstelle → Kernänderungen werden nötig, da gibt 2 Konsolentypen unter Unix existieren.

Die Mini-Systeme f. Siemens haben nur 256 KByte Hauptspeicher, der führt zu dauerndem Aus- und Einlagern der Programme und damit zu Geschwindigkeitsverlust. Verbesserung durch:

- 3) geänderte Hauptspeicherverwaltung
Prozß erhält mehr Hauptspeicher als er anfordert → Bei der nächsten Anforderung muß er nicht wieder ausgelagert werden, sondern besitzt den Hauptspeicher bereits.

2. The first part of the paper

is devoted to a general discussion of the

principles of the method of moments

and its application to the problem of

estimating the parameters of a

multivariate normal distribution

by means of the method of moments

and the method of maximum likelihood

estimation. It is shown that the

method of moments is more efficient

than the method of maximum likelihood

estimation in this case. The

results are compared with those of

other methods of estimation.

→ Das Swapping wird vermehrt.

- (1) /usr/include/sys/param.h wird "geschrumpft". Die Konstanten werden verkleinert → das abgewandelte Unix wird kleiner → weniger Hauptspeicher wird stat. permanent durch das Unix belegt.

Bsp: Anzahl Puffer im Pufferpool: 20 statt 30.

Allerdings: "param.small" eignet sich nicht für ein normales Betriebssystem.

im Detail:

/usr/sys/dev:

sl.c f. 8 Schnittstellen, slputchar, slgetchar
für die Konsole

kl.c Änderung: klputchar, klgetchar
Auswahl welches putchar, getchar
in /usr/sys/sys/prf.c, f. 9 Schnittstellen ^{steht}

otloops.s letzter MOVE R-Befehl in einzelnen
/ot.c MOVE-Befehle aufgelöst,
HW-Gründe

tm.c Konstante für RETRIES berichtigt
makefile sl.o in lib2

ot.o wird zu ot503.o oder ot603.o
→ in lib-choice, statt lib2

(TANDON 503 und 603 sind im Feld)

/usr/sys/sys:

prf.c putchar, getchar angefügt
Feststellung welche Konsole
existiert:

1. Ausprechen der DV11j mit fsword
2. Erg. -1 → slu muß Konsole sein.

sys1.c sbreak liest 6k auf einmal,
statt der angeforderten Menge.

main.c neue Ausgabe ... V1.4/04...

mch.s Ausgaben auf Konsole auskom-
...iniert

[Faint, illegible handwritten text, likely bleed-through from the reverse side of the page. The text is arranged in several paragraphs.]

- c.c. sl-Treiber neu: major nr.: 24
l.s. neue Konstanten:
SLU: 4 slu Schnittstellen (einschl. Konsole)
SLU8: 4 weitere slu Schnittstellen (von HW Seite noch nicht ok)
SLDL2: 4 weitere DLV11j Schnittstellen, nur wenn SLU = 1!!
DLV11j Karte mit Interruptvektor 340 - 370 einstellen.

Die Konstante DL2 bedeutet dagegen 2 DLV11j Karten, auf der 2. ist die Konsole verdrahtet: 340, 350, 360, 60.
1. DLV11j hat 4 normale Hy SS: 300 - 330.

confinfo }
name.c } update

conf.all einschließlich slu

lib1.big / ..small } 2 Libraries parallel:
lib2.big / " • small: alles mit param.small übersetzt
libchoice.big / " • big: ... param.big...
lib3.big / " → normale Größe

außerdem muß ranlib bei den libs verwendet werden!

[The text on this page is extremely faint and illegible. It appears to be a handwritten document, possibly a letter or a journal entry, covering the entire page area.]

libchoice... enthält zusätzlich
ot503.0, ot603.0

lib?... , conf. modul haben ot503.0

makefile 2 Zweige:

unix.sm aller .small

unix.bg aller .big

unix.sm wird bei den
Siemens - Mini - Systemen
verwendet (conf.small)

unix.bg ist normal

• (z.B. conf.big)

/usr/include/sys:

param.small

param.big

Unterschiede siehe

Anlage ① diff....

/etc:

newconf

whatconf

{ Abfrage für unix.sm oder unix.bg
neue Abfragen für l.s,
Abfrage für unix.sm oder unix.bg
ergänzt, lbp - Fehler beseitigt,

! Kl wird immer angegeben,
auch wenn es nicht gebraucht
wird! (Könnte nicht verhindern,
daß Kb.o zugebunden wird)

ty5, tytype

neue Zeilen für ty50
(Konsole) - ty57

Handwritten text, likely a letter or document, with a vertical line separating the left and right columns. The text is mostly illegible due to fading.

Handwritten text, likely a letter or document, with a vertical line separating the left and right columns. The text is mostly illegible due to fading.

/dev:

makefile ergänzt, umgestellt
HySO (slu-Konsole) muß genauso
wie HyΦ (DLV11;-Konsole)
vorab existieren.

/sa:

otformat, rlformat verbessert
alle Programme können
jetzt mit beiden Konsolentypen arbeiten.
Siemens erhält auch mentst, t68030, ottest

/unix slu als Konsole möglich

/usr/man/man4:

ot.4

/usr/man/man7:

iopage.7

/usr/doc/pcs/setup:

floppy-ot

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① diff param. small param. big

Sm	{	DEF	16	size of buffer cache #
		RBUF	48	def. 2 nd power of two #
		NINODE	20	* number of in-core inodes #
		NFILE	50	* number of in-core file structures #
		AMOUNT	5	* number of mountable file systems #
bg	{	RBUF	30	/* size of buffer cache #
		RHBUF	64	/* must be power of two #
		NINODE	100	/* number of in-core inodes #
		NFILE	100	/* number of in-core file structures #
		AMOUNT	20	/* number of mountable file systems #
Sm	{	CMAPBIZ	40	/* size of core allocation area #
		SWAPBIZ	40	/* size of swap allocation area #
bg	{	CMAPBIZ	50	/* size of core allocation area #
		SWAPBIZ	50	/* size of swap allocation area #
Sm	{	PROCS	60	/* max number of processes #
		PURETEXT	20	/* max number of pure texts #
		OLIST	100	/* max total olist size #
bg	{	PROCS	100	/* max number of processes #
		PURETEXT	50	/* max number of pure texts #
		OLIST	200	/* max total olist size #

WATER TOWER



WATER TOWER

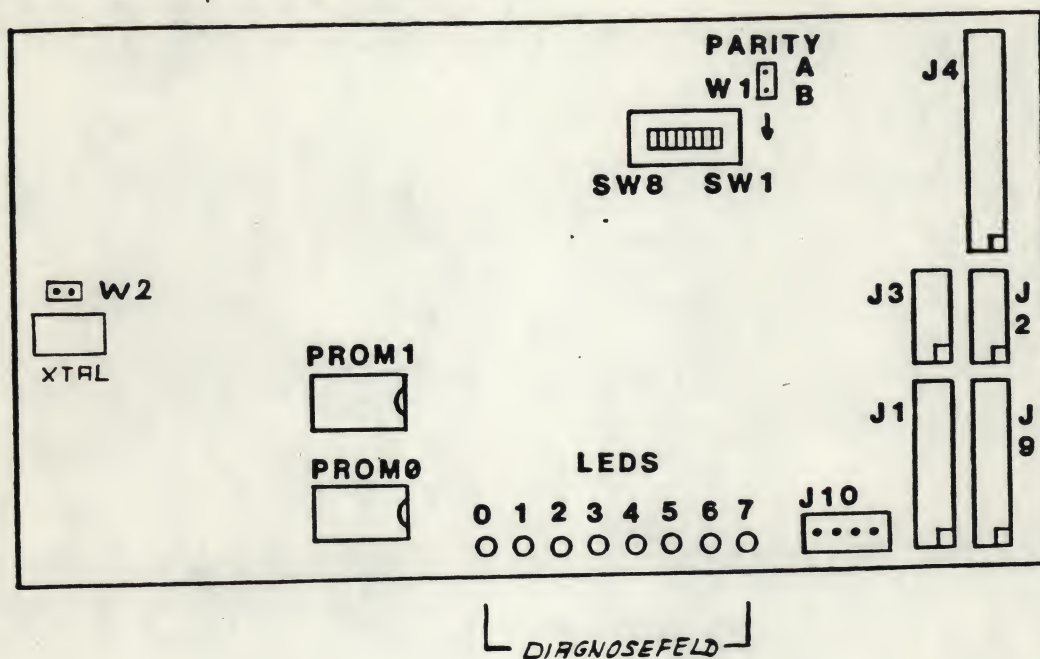
WATER TOWER

WATER TOWER



WATER TOWER	WATER TOWER	WATER TOWER	WATER TOWER	WATER TOWER
WATER TOWER	WATER TOWER	WATER TOWER	WATER TOWER	WATER TOWER
WATER TOWER	WATER TOWER	WATER TOWER	WATER TOWER	WATER TOWER

DTC-520 R



J1....WINCHESTER CONTROL CABLE

J2,J3....WINCHESTER READ/WRITE CABLES

J4....HOST BUS CABLE

(SCSI-ADAPTER)

J9....FLOPPY CONTROL CABLE

J10....POWER CONNECTOR

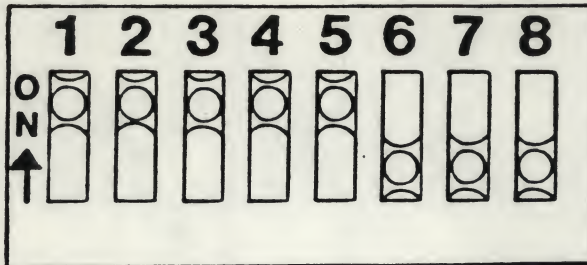
			Fremdautorisationen			
			83	Tag	Name	Maststab
			Bearb.	7.12	W. Schütz	
			Gedr.	H. H.	Kleinig	
			Nr.			
						DTC 520 A
						2 / 4

7018 73



1. The first part of the document is a list of items, each with a number and a description. The items are listed in a column on the left side of the page. The descriptions are written in a small, handwritten font. The items are numbered 1 through 10. The descriptions are: 1. A small, rectangular object. 2. A small, rectangular object. 3. A small, rectangular object. 4. A small, rectangular object. 5. A small, rectangular object. 6. A small, rectangular object. 7. A small, rectangular object. 8. A small, rectangular object. 9. A small, rectangular object. 10. A small, rectangular object.

**HARD DISK
SECTOR SIZE**



SWITCH	DRIVE TYPE SELECT	ON	OFF
8	LUN 0	HARD DISK	FLOPPY DISK
7	LUN 1	HARD DISK	FLOPPY DISK
6	LUN 2	ILLEGAL	FLOPPY DISK
5	LUN 3	ILLEGAL	FLOPPY DISK
4	NOT USED		
3	NOT USED		
2	HARD DISK SECTOR SIZE	<u>SWITCH 1</u> <u>SWITCH 2</u>	
1		ON	ON 256 bytes per Sector

Standard:

2,7 und 8
auf -ON-

<u>SWITCH 1</u>	<u>SWITCH 2</u>
1	1
1	2
1	3
1	4
1	5
1	6
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1	90
1	91
1	92
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1	94
1	95
1	96
1	97
1	98
1	99
1	100

ON
OFF
ON
OFF

ON
ON
OFF
OFF

```

256 bytes per Sector and 33 Sectors per Track
512 bytes per Sector and 18 Sectors per Track
1,024 bytes per Sector and 8 Sectors per Track
Undefined

```

NOTE: LUN 2 & 3 CAN ONLY BE ASSIGNED AS FLOPPY DRIVES.

W1 - Removed
W2 - Installed

					Fremdtaoleranzen			
					B3	Tag	Name	
					Bearb.	7.10	W. Schulte	Schalter - und Brückeneinst.
					Gedr.	" 16.	Zugprüfung,	
					Messung			
						DTC	DTC 520 A .	3 /

5. Konfiguration

Die Konfiguration des SLS-88-Boards erfolgt im Wesentlichen ueber einen 10-fach DIL-Schalter. Interrupt-Level- und Interrupt-Vektor-Einstellung geht ueber Bruecken.

5.1 Konfigurationsschalter

Position (1) im Bestueckungsplan (Anhang) zeigt den Konfigurationsschalter. Zum Schutz gegen Verstellung beim Einstecken bzw. Herausziehen der Platine besitzt der Schalter ein Fenster. Im folgenden sind die moeglichen Einstellungen beschrieben.

Einstellung der Systemkonsole

S1:	S1=OFF		=>	1 STOP-BITS	•
	S1=ON		=>	2 STOP-BIT	
S2:	S2=OFF		=>	8 BIT/CHAR	•
	S2=ON		=>	7 BIT/CHAR	
S3, S4:	S3=OFF	S4=OFF	=>	9600 Baud	•
	S3=ON	S4=OFF	=>	300 Baud	
	S3=OFF	S4=ON	=>	1200 Baud	
	S3=ON	S4=ON	=>	110 Baud	

Einstellung der Adressen

- SLU-Adresse

S5:	S5 = OFF	=>	\$FFFC00 - \$FFFCFF	•
	S5 = ON	=>	\$FFFD00 - \$FFFDFF	

- SCSI - Adapter - Adressen

S6:	S6 = OFF	=>	\$FFFB80 - \$FFFBFF	•
	S6 = ON	=>	\$FFFB00 - \$FFFBFF	

S7: nicht verwendet!

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unbezahlte Vervielfältigung, Mitteilung an andere ist!
strafbar und schadenersatzpflichtig

0 0 0 0 0 0 0 0
DS7 DS0

Error Code (HEX)	Interpretation
00	No Error
01	No Index from drive
02	No Track 00 from drive
03	Sector Address Out of Bounds
04	Winchester disk not selected
05	No Seek Complete from Winchester disk
06	No ID Address Mark
07	No Data Address Mark
08	Seek Error (Cylinder or Head not correct)
09	Sector not found
0A	ID ECC error
0B	Not used
0C	Invalid Command
0D	Incorrect DATA MARK
0E	Incorrect ID MARK
0F	Incorrect cylinder address from drive
10	Incorrect sector address from drive
11	Incorrect head address from drive
12	Uncorrectable Data Error
13	Correctable Data Error
14	Drive not READY
15	Write fault
16	not used
17	Drive write protected
18	RAM diagnostic error
19	not used
1F	Unable to read the Alternate Track Address
20	Parity Error from host adaptor. If this error occurs, the host adaptor has a fault in the parity generation circuitry.
21	Bad Block detected from drive
22	Invalid function for this drive type
31	Attempted to directly access an alternate Track
32	Seek in progress
33	Volume overflow
81	Multiple Winchester disks selected. Fatal error.
82	Sequencer time-out during disk or Host transfer.

The following LED codes are also displayed to indicate the state of the controller.

```

40      Controller Idling
C0      Controller is Selected

```

[illegible]

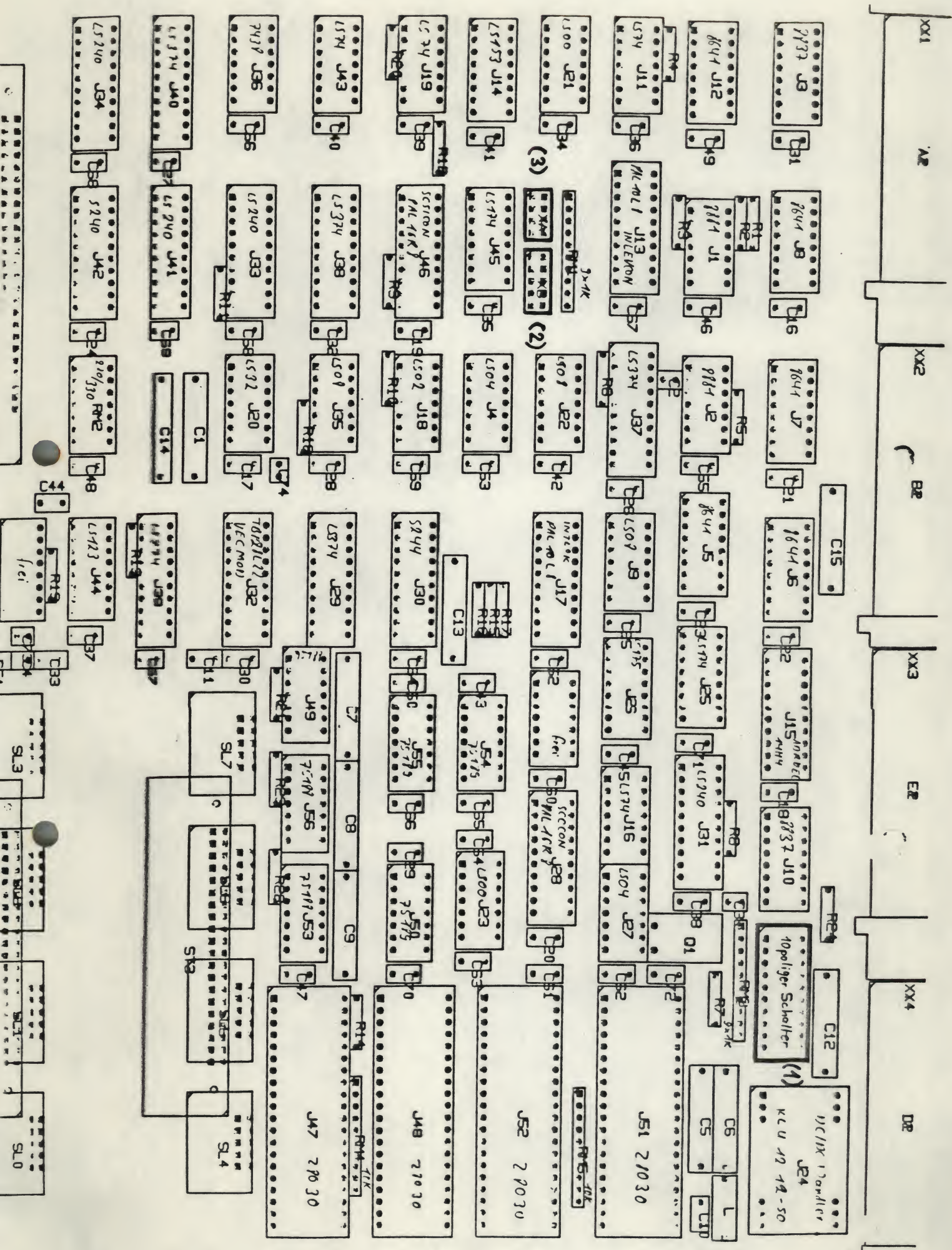
THE UNIVERSITY OF CHICAGO
DEPARTMENT OF CHEMISTRY
JANUARY 1954

RECEIVED

TO THE DIRECTOR
FROM THE DEPARTMENT OF CHEMISTRY
SUBJECT: [Illegible]
[Illegible text follows, appearing to be a letter or report.]

Very truly yours,
[Illegible Signature]

[Illegible]	[Illegible]	[Illegible]	[Illegible]
-------------	-------------	-------------	-------------



Disable fuer SCSI-Adapter und Modem

S8:	S8 = OFF	=>	SCSI-Adapter enabled	•
	S8 = ON	=>	SCSI-Adapter disabled	
S9,S0:	S9 = S0 = OFF	=>	Modem enabled Kanal 8	•
	S9 = S0 = ON	=>	Modem disabled	
			(gilt nur fuer Kanal 7 bzw. Kanal 15)	

**ACHTUNG: S9,S0 muessen die gleiche Stellung
haben!**

- Standardeinstellung (alle Schalter auf "OFF")

25. September 1983

1900 - 1901

Received of the
Hon. Secy. of the
Interior
for the
Department of the Interior
the sum of \$100.00
for the
Department of the Interior

for the Department of the Interior

for the Department of the Interior

for the Department of the Interior

5.2 Brueckeneinstellung

Position (2) und (3) des Bestueckungsplans zeigen Bruecken zur Einstellung von Interrupt-Vektor und -Level. Layoutmaessig sind bereits Brueckungen vorgenommen worden. Wenn moeglich sollte diese standardmaessige Einstellung nicht veraendert werden. Falls eine Aenderung unumgaenglich ist, sollte man sich ueber die Konsequenzen im Klaren sein.

5.2.1 Einstellung des Interrupt-Vektors

Ueber 5 Bruecken kann der Interruptvektor des SCSI-Adapters eingestellt werden.

V3 V4 V5 V6 V7

Eine eingelegte Bruecke bedeutet eine "0". Durch Layoutbruecken bei V6 und V5 ist der Standardvektor 230 (OKTAL) eingestellt. Es wird empfohlen, den Vektor beizubehalten.

Die Einstellung der SLU-Interruptvektoren erfolgt durch entsprechende Programmierung der SCC-Bausteine. Um die weiter oben beschriebenen Vektoren (Kapitel 4.1) zu generieren, muss in das Vektor-Register des jeweiligen Z8030 folgendes geschrieben werden:

Bit 7 : "1"

Bit 6 : B6 = 0 bei Board 1 (Kanal 0 - 7)
 B6 = 1 bei Board 2 (Kanal 8 -15)

Bit 5,4: B5 = 0, B4 = 0 bei Kanal 0,1 (8, 9)
 B5 = 0, B4 = 1 bei Kanal 2,3 (10,11)
 B5 = 1, B4 = 0 bei Kanal 4,5 (12,13)
 B5 = 1, B4 = 1 bei Kanal 6,7 (14,15)

Bit 3-0: Keine Bedeutung

5.2.2 Einstellung der Interrupt-Level

Ueber 4 Bruecken ((3) im Bestueckungsplan) lassen sich die Interrupt-Level fuer SLU und SCSI einstellen

SL1 SLO WF1 WFO

Interrupt-Level SLU

SL1 = OFF SLO = OFF => I-LEVEL = 7
SL1 = OFF SLO = ON => I-LEVEL = 6
SL1 = ON SLO = OFF => I-LEVEL = 5
SL1 = ON SLO = ON => I-LEVEL = 4

Interrupt-Level SCSI

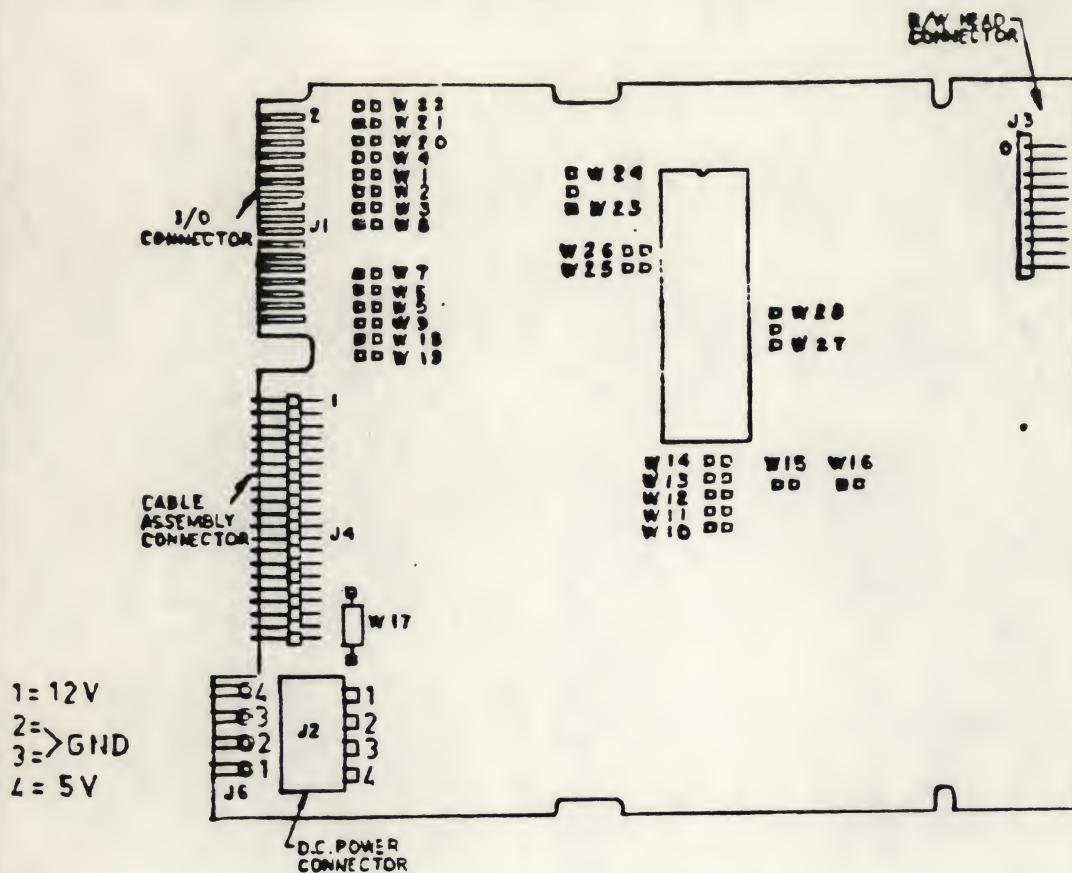
WF1 = OFF WFO = OFF => I-LEVEL = 7
WF1 = OFF WFO = ON => I-LEVEL = 6
WF1 = ON WFO = OFF => I-LEVEL = 5
WF1 = ON WFO = ON => I-LEVEL = 4

Layoutmaessig ist hier ein Interrupt-Level von '4' fuer die SLU und ein Interrupt-Level '5' fuer den SCSI-Adapter vorgesehen.

Achtung:

Unabhaengig von dieser Einstellung hat auf dem Board der SCSI-Interrupt Vorrang vor einem Interrupt der SLU.

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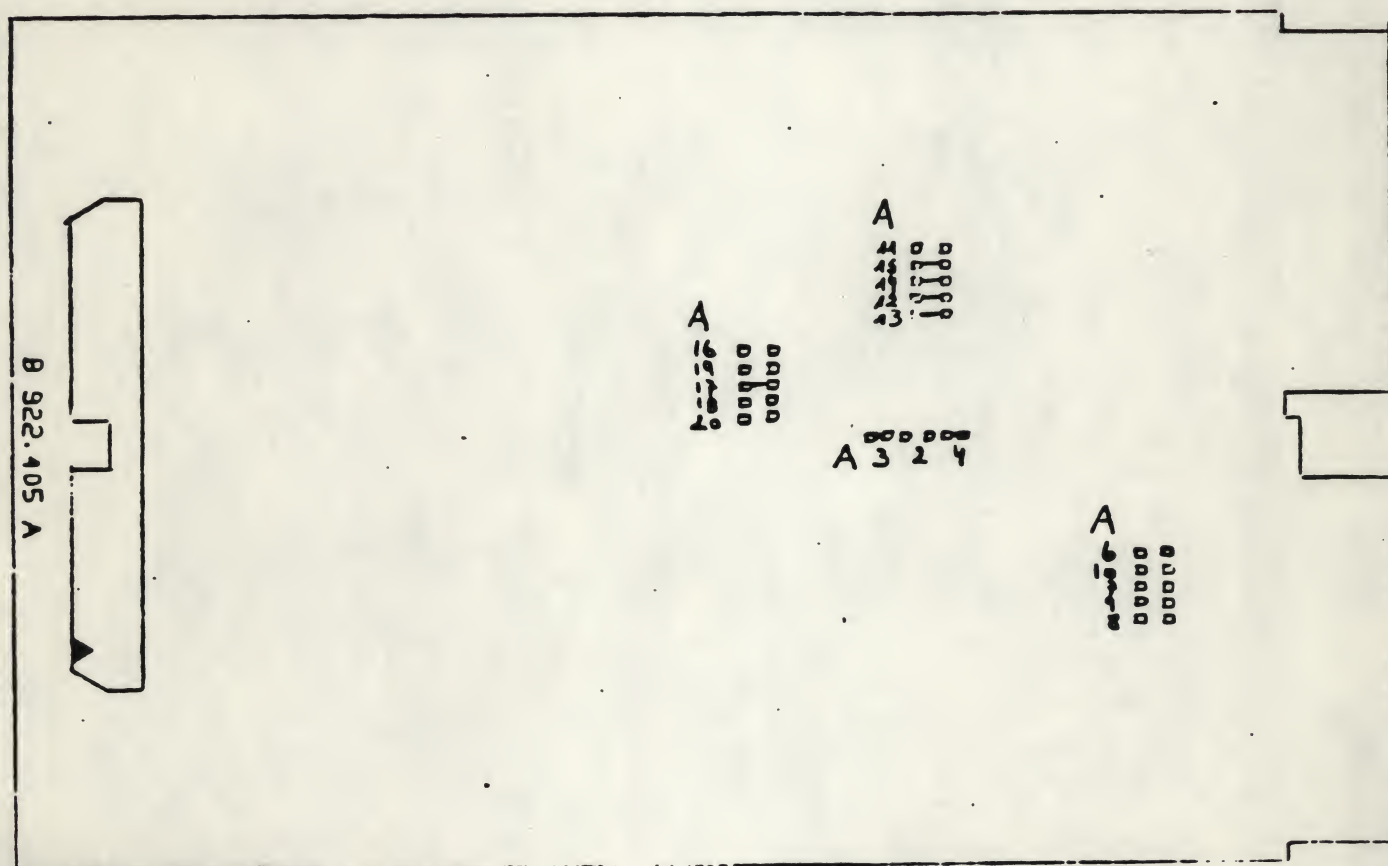


Controller DTC 520			Controller DTC 520		
Brücke	Drive 0	Drive 1	Brücke	Drive 0	Drive 1
V. 1			W. 14		
W. 2			W. 15		
V. 3	—		W. 16	—	—
V. 4		—	W. 17	—	—
W. 8			W. 20		
V. 15			W. 21		
			W. 22		
W. 9			W. 23	—	—
W. 19	—	—	W. 24		
V. 5	—	—	W. 25	—	—
V. 6	—	—	W. 26		
W. 7			W. 27		
V. 10			W. 28	—	—
V. 11	—	—			
W. 12					
V. 13					

Zeichenerklärung: installed ☒ removed ☐

Freigegeben					
Tag				Name	
Bearb. 6-12					
Gepr.					
A. 1000					
				DRIVE EINSTELLTABELLE	
				TM 101-4 mit DTC 520 Controller	
				B 923.008	
Ausgabe	Änderung	Tag	Name		

3.1 STANDARD-EINSTELLUNG *STREAMER*



Brueckeneinstellung ab Werk:

A 1 = nicht
A 2 = ver
A 3 = aendern !
A 4 =

A16 = VEKTORBIT 7 : out
A17 = VEKTORBIT 6 : in
A18 = VEKTORBIT 5 : out
A19 = VEKTORBIT 4 : out
A20 = VEKTORBIT 3 : out

A 6 = ADRESSBIT 12 : out
A 7 = ADRESSBIT 11 : out
A 8 = ADRESSBIT 10 : out
A 9 = ADRESSBIT 9 : out
A10 = ADRESSBIT 8 : out
A11 = ADRESSBIT 7 : out
A12 = ADRESSBIT 6 : in
A13 = ADRESSBIT 5 : in
A14 = ADRESSBIT 4 : in
A15 = ADRESSBIT 3 : in

Page 12



Table 1. Summary of Data

Year	Month	Day	Time	Location	Observations
1984	Jan	15	10:00	Station A	Clear sky, light wind
1984	Jan	20	14:00	Station B	Cloudy, moderate wind
1984	Feb	05	08:00	Station A	Foggy, calm
1984	Feb	10	12:00	Station B	Sunny, strong wind
1984	Mar	01	16:00	Station A	Overcast, light rain
1984	Mar	05	09:00	Station B	Clear, calm
1984	Mar	10	13:00	Station A	Partly cloudy, light wind
1984	Mar	15	17:00	Station B	Sunny, moderate wind
1984	Mar	20	11:00	Station A	Cloudy, calm
1984	Mar	25	15:00	Station B	Sunny, strong wind
1984	Mar	30	07:00	Station A	Foggy, calm
1984	Apr	05	10:00	Station B	Clear, light wind
1984	Apr	10	14:00	Station A	Overcast, moderate wind
1984	Apr	15	08:00	Station B	Sunny, calm
1984	Apr	20	12:00	Station A	Partly cloudy, light wind
1984	Apr	25	16:00	Station B	Sunny, strong wind
1984	Apr	30	09:00	Station A	Cloudy, calm
1984	May	05	13:00	Station B	Sunny, moderate wind
1984	May	10	17:00	Station A	Overcast, light rain
1984	May	15	11:00	Station B	Clear, calm
1984	May	20	15:00	Station A	Partly cloudy, light wind
1984	May	25	07:00	Station B	Sunny, strong wind
1984	May	30	10:00	Station A	Cloudy, calm
1984	Jun	05	14:00	Station B	Sunny, moderate wind
1984	Jun	10	18:00	Station A	Overcast, light rain
1984	Jun	15	12:00	Station B	Clear, calm
1984	Jun	20	16:00	Station A	Partly cloudy, light wind
1984	Jun	25	09:00	Station B	Sunny, strong wind
1984	Jun	30	13:00	Station A	Cloudy, calm
1984	Jul	05	17:00	Station B	Sunny, moderate wind
1984	Jul	10	11:00	Station A	Overcast, light rain
1984	Jul	15	15:00	Station B	Clear, calm
1984	Jul	20	07:00	Station A	Partly cloudy, light wind
1984	Jul	25	10:00	Station B	Sunny, strong wind
1984	Jul	30	14:00	Station A	Cloudy, calm
1984	Aug	05	18:00	Station B	Sunny, moderate wind
1984	Aug	10	12:00	Station A	Overcast, light rain
1984	Aug	15	16:00	Station B	Clear, calm
1984	Aug	20	09:00	Station A	Partly cloudy, light wind
1984	Aug	25	13:00	Station B	Sunny, strong wind
1984	Aug	30	17:00	Station A	Cloudy, calm
1984	Sep	05	11:00	Station B	Sunny, moderate wind
1984	Sep	10	15:00	Station A	Overcast, light rain
1984	Sep	15	07:00	Station B	Clear, calm
1984	Sep	20	10:00	Station A	Partly cloudy, light wind
1984	Sep	25	14:00	Station B	Sunny, strong wind
1984	Sep	30	18:00	Station A	Cloudy, calm
1984	Oct	05	12:00	Station B	Sunny, moderate wind
1984	Oct	10	16:00	Station A	Overcast, light rain
1984	Oct	15	09:00	Station B	Clear, calm
1984	Oct	20	13:00	Station A	Partly cloudy, light wind
1984	Oct	25	17:00	Station B	Sunny, strong wind
1984	Oct	30	11:00	Station A	Cloudy, calm
1984	Nov	05	15:00	Station B	Sunny, moderate wind
1984	Nov	10	07:00	Station A	Overcast, light rain
1984	Nov	15	10:00	Station B	Clear, calm
1984	Nov	20	14:00	Station A	Partly cloudy, light wind
1984	Nov	25	18:00	Station B	Sunny, strong wind
1984	Nov	30	12:00	Station A	Cloudy, calm
1984	Dec	05	16:00	Station B	Sunny, moderate wind
1984	Dec	10	09:00	Station A	Overcast, light rain
1984	Dec	15	13:00	Station B	Clear, calm
1984	Dec	20	17:00	Station A	Partly cloudy, light wind
1984	Dec	25	11:00	Station B	Sunny, strong wind
1984	Dec	30	15:00	Station A	Cloudy, calm

DSG101 - Med

Exit	~Z
save to Disk	~D
-Tab	Linefeed
Refresh	~X
ChTab	~T
ChWin	~C
Left	~L
Right	~R
Window	~W
Control char	~\
Macrofunction	~F

Home	+Page	+Line	+Srch
Goto	-Page	-Line	-Srch
Pick	Open	Do	Use
Put	Close	Restor	Enter
Delete Char	Insert		

TeleVideo - Med

F1	F2	F3	F4	F5
Exit	Save	WinLeft	WinRight	Refresh

-Tab Linefeed
Control char ^\

Home	Insert	Window		Refresh
Goto	Macro	ChWin	Restore	
Tab	+Page	+Line	+Srch	Pick
	-Page	-Line	-Srch	Put
ChTab	Do	Use	Open	Enter
Delch			Close	

NAME

boot — startup procedures

DESCRIPTION

A PDP11/45 and PDP11/70 UNIX system is started by a two-stage process. The first is a primary bootstrap which is able to read in relatively small stand-alone programs; the second (called *boot*) is used to read in the system itself.

The primary bootstrap must reside in the otherwise unused block zero of the boot device. It can be read in and started by the standard ROM programs, or if necessary by keying in a small startup routine. This program is capable of loading type 407 executable files (not shared, not separate I&D). The user types on the system console the name of the program wished, in this case *boot*, followed by a carriage return; the named program is retrieved from the file system that starts at block 0 of drive 0 of the boot device. No prompt is given, no diagnostic results if the file cannot be found, and no provision is made for correcting typographical errors.

The second step, called *boot*, actually brings in the system. When read into location 0 and executed, *boot* sets up memory management, relocates itself into high memory, and types a ':' on the console. Then it reads from the console a device specification (see below) followed immediately by a pathname. *Boot* finds the corresponding file on the given device, loads that file into memory location zero, sets up memory management as required, and calls the program by executing a 'trap' instruction. Normal line editing characters can be used.

Conventionally, the name of the secondary boot program is '/boot' and the name of the current version of the system is '/unix'. Then, the recipe is:

- 1) Load block 0 of the boot device by fiddling with the console keys as appropriate for your hardware. If you have no appropriate ROM, some programs suitable for manual use are given below.
- 2) Type *boot*.
- 3) When the prompt is given, type
 hp(0,0)unix
 or
 rp(0,0)unix
 depending on whether you are loading from an RP04/5/6 or an RP03 respectively. The first 0 indicates the physical unit number; the second indicates the block number of the beginning of the logical file system to be searched. (See below).

When the system is running, it types a '#' prompt. After doing any file system checks and setting the date (*date(8)*) a multi-user system is brought up by typing an EOT (control-d) in response to the '#' prompt.

Device specifications. A device specification has the following form:

device(unit,offset)

where *device* is the type of the device to be searched, *unit* is the unit number of the device, and *offset* is the block offset of the file system on the device. *Device* is one of the following

rp	RP03
hp	RP04/5/6
rk	RK05

For example, the specification

hp(1,7000)

indicates an RP03 disk, unit 1, and the file system found starting at block 7000 (cylinder 35).

NAME

badsect - create files to contain bad sectors

SYNOPSIS

/etc/badsect sector ...

DESCRIPTION

Badsect makes a file to contain a bad sector. Normally, bad sectors are made inaccessible by the standard formatter, which provides a forwarding table for bad sectors to the driver; see *bad144(8)* for details. If a driver supports the bad blocking standard it is much preferable to use that method to isolate bad blocks, since the bad block forwarding makes the pack appear perfect, and such packs can then be copied with *dd(8)*. The technique used by this program is also less general than bad block forwarding, as *badsect* can't make amends for bad blocks in the i-list of file systems or in swap areas.

Adding a sector which is suddenly bad to the bad sector table currently requires the running of the standard DEC formatter, as UNIX does not supply formatters. Thus to deal with a newly bad block or on disks where the drivers do not support the bad-blocking standard *badsect* may be used to good effect.

Badsect is used on a quiet file system in the following way: First mount the file system, and change to its root directory. Make a directory BAD there and change into it. Run *badsect* giving as argument all the bad sectors you wish to add. (The sector numbers should be relative to the beginning of the file system, but this is not hard to do as the system reports relative sector numbers in its console error messages.) Then change back to the root directory, unmount the file system and run *fsck(8)* on the file system. The bad sectors should show up in two files or in the bad sector files and the free list. Have *fsck* remove files containing the offending bad sectors, but do not have it remove the BAD/nnnnn files. This will leave the bad sectors in only the BAD files.

Badsect works by giving the specified sector numbers in a *mknode(2)* system call, creating a regular file whose first block address is the block containing bad sector and whose name is the bad sector number. The file has 0 length, but the check programs will still consider it to contain the block containing the sector. This has the pleasant effect that the sector is completely inaccessible to the containing file system since it is not available by accessing the file.

SEE ALSO

bad144(8), *fsck(8)*

BUGS

If both sectors which comprise a (1024 byte) disk block are bad, you should specify only one of them to *badsect*, as the blocks in the bad sector files actually cover both (bad) disk sectors.

Document Title

The following information was obtained from the records of the Department of the Interior, Bureau of Land Management, regarding the land owned by the United States in the State of California.

The land is located in the County of Los Angeles, State of California, and is situated in the Township of ...

The land is situated in the Township of ... and is bounded by ... on the north, south, east and west.

The land is situated in the Township of ... and is bounded by ... on the north, south, east and west.

The land is situated in the Township of ... and is bounded by ... on the north, south, east and west.

ROM programs. The following programs to call the primary bootstrap may be installed in read-only memories or manually keyed into main memory. Each program is position-independent but should be placed well above location 0 so it will not be overwritten. Each reads a block from the beginning of a device into core location zero. The octal words constituting the program are listed on the left.

RK (drive 0):

```

012700      mov      $rkda,r0
177412
005040      clr      -(r0)          / rkda cleared by start
010040      mov      r0, -(r0)
012740      mov      $5, -(r0)
000005
105710      1:      tstb      (r0)
002376      bge      lb
005007      clr      pc

```

RP (drive 0)

```

012700      mov      $rpmr,r0
176726
005040      clr      -(r0)
005040      clr      -(r0)
005040      clr      -(r0)
010040      mov      r0, -(r0)
012740      mov      $5, -(r0)
000005
105710      1:      tstb      (r0)
002376      bge      lb
005007      clr      pc

```

FILES

/unix — system code
 /usr/mdcc/rpuboot, /usr/mdcc/hpuboot — copies of primary bootstrap
 /boot — second stage bootstrap

SEE ALSO

init(8)

NAME

check - disk checking and formatting

SYNOPSIS

/sa/check

DESCRIPTION

Check is the *QU68000* disk checking program. Additionally it has a formatting capability for disks with standard headers. *Check* tests disks for the location of bad sectors and writes the *bad sector file* onto disks. The bad sector file is a list of all bad sectors found on a disk. *MUNIX* uses this information to avoid allocating bad sectors to a user's file. If there is an error in a header, or if there is a read or write error within one sector, that sector is defined as a *bad sector*. If possible the header of this sector is marked.

The devices in the following table are supported by *check*. Devices indicated by *YES* in the column *Formatting* uses standard headers and can be formatted by *check*. For other devices exists a specific standalone formatting program (i.e. *rlformat*).

Supported Devices

Device Name	Disk Type	CSR Address	Formatting
hk	RK06/07	FFFF20	YES
rl	RL01/02	FFF900	NO
hl	RL01/02	FFF910	NO
rm	RM02/03/05	FFFD00	YES

Check is a standalone program. Load and start it by the *Minitor* (see *Minitor-Manual*). For example type:

```
.rl          (load from RL02)
./sa/check  (executable file)
.g0         (start the program)
```

You will get a list of all supported devices (i.e. *rl hl hk rm*). Type the device name and the unit number of the disk to be tested or formatted. The input format for opening a device is as follows:

```
devname(unit) [-r] [-p] | exit
```

where *devname* is one of the device names from the table above and *unit* is the number of the physical drive to be tested. The option *-p* opens the disk in *preserve-mode*, while *-r* opens the disk in *read-only-mode*. A missing option opens the disk in *read/write-mode*.

Exit stops execution of the *check* program.

In *read/write-mode* the contents of the disk is overwritten, bad sectors are marked, the bad sector file is initialized or modified and formatting is possible. This is the proper mode for new disks.

In *preserve-mode* the contents of the disk is left unchanged. Sectors are tested only by reading, no formatting is done, no sector is marked as bad and the contents of an existing bad sector file is not modified.

In *read-only-mode* sectors are tested only by reading, bad sectors are marked and the bad sector file is initialized or modified. Formatting is

inhibited.

For example (user input is **bold**):

```
type: devname(unit) [-r] [-p] | exit
: rl(0) -r or
: hk(2) or
: exit
```

If you entered a legal device name you are now in command mode. You will get a list of available commands. Every command you choose refers to the previously specified device and unit. To leave the command mode simply type **q**. The other commands are explained below. The command descriptions refer to disks opened in *read/write-mode*. If you opened a disk in another mode read the descriptions accordingly:

- b** *Bad Sector Scan:*
The complete disk is tested. Sectors are first written in increasing order and then read in decreasing order. A bad sector file is written onto the disk.
- s** *Selected Sector Test:*
Consecutive sectors are tested. Choose the starting sector and the number of sectors to be tested. The sectors are tested alternately: *1st sector, last sector, 2nd sector, ...* to the midst of the given interval. The already existing bad sector file is updated.
- a** *Append Bad Sectors:*
Bad sectors are appended manually to an existing bad sector file. Type in the numbers of sectors to be marked as bad sectors. Type **-1** to exit from this command.
This command is extremely helpful if you know any bad sectors not detected by the check program.
- i** *Inspect Bad Sector File:*
List the contents of an existing bad sector file.
- r** *Random Sector Test:*
Test disk sectors in random order. Exit from this command by pushing INIT. An existing bad sector file is destroyed.
- f** *Format Disk:*
Write good sector headers and initialize data fields optionally on the complete disk volume or on single tracks.
- ?** *List Commands:*
Print a table of all available commands.

As a proper test strategy for new disks we suggest command **b** (very fast) followed by command **s** with the whole disk as the sector interval (very slow: you better go for lunch). If there is a new bad sector on an already used disk test a small range around the bad sector by command **s** or use command **a** to mark the bad sector manually. Used disks should be checked in *read-only-mode*.

Each command can be interrupted by pushing INIT. Then you will get the *Minitor* prompt. To restart *check* you have to type **g0**.

SEE ALSO

rl(4), rm(4), hk(4), iopage(7), format(3)
Bad Sector Handling (Vol. 2c)
Minitor-Manual

NAME

cron — clock daemon

SYNOPSIS

/etc/cron

DESCRIPTION

Cron executes commands at specified dates and times according to the instructions in the file */usr/lib/crontab*. Since *cron* never exits, it should only be executed once. This is best done by running *cron* from the initialization process through the file */etc/rc*; see *init(8)*.

Crontab consists of lines of six fields each. The fields are separated by spaces or tabs. The first five are integer patterns to specify the minute (0-59), hour (0-23), day of the month (1-31), month of the year (1-12), and day of the week (1-7 with 1=monday). Each of these patterns may contain a number in the range above; two numbers separated by a minus meaning a range inclusive; a list of numbers separated by commas meaning any of the numbers; or an asterisk meaning all legal values. The sixth field is a string that is executed by the Shell at the specified times. A percent character in this field is translated to a new-line character. Only the first line (up to a % or end of line) of the command field is executed by the Shell. The other lines are made available to the command as standard input.

Crontab is examined by *cron* every minute.

FILES

/usr/lib/crontab

...

...

Finally, there may be inodes reported by *dcheck* that have 0 links and 0 entries. These occur on the root device when the system is stopped with pipes open, and on other file systems when the system stops with files that have been deleted while still open. A *clri* will free the inode, and an *icheck -s* will recover any missing blocks.

Why did it crash? UNIX types a message on the console typewriter when it voluntarily crashes. Here is the current list of such messages, with enough information to provide a hope at least of the remedy. The message has the form 'panic: ...', possibly accompanied by other information. Left unstated in all cases is the possibility that hardware or software error produced the message in some unexpected way.

blkdev

The *getblk* routine was called with a nonexistent major device as argument. Definitely hardware or software error.

devtab

Null device table entry for the major device used as argument to *getblk*. Definitely hardware or software error.

liinit

An I/O error reading the super-block for the root file system during initialization.

out of inodes

A mounted file system has no more i-nodes when creating a file. Sorry, the device isn't available; the *icheck* should tell you.

no fs

A device has disappeared from the mounted-device table. Definitely hardware or software error.

no imt

Like 'no fs', but produced elsewhere.

no inodes

The in-core inode table is full. Try increasing NINODE in param.h. Shouldn't be a panic, just a user error.

no clock

During initialization, neither the line nor programmable clock was found to exist.

swap error

An unrecoverable I/O error during a swap. Really shouldn't be a panic, but it is hard to fix.

unlink — iget

The directory containing a file being deleted can't be found. Hardware or software.

out of swap space

A program needs to be swapped out, and there is no more swap space. It has to be increased. This really shouldn't be a panic, but there is no easy fix.

out of text

A pure procedure program is being executed, and the table for such things is full. This shouldn't be a panic.

trap

An unexpected trap has occurred within the system. This is accompanied by three numbers: a 'ka6', which is the contents of the segmentation register for the area in which the system's stack is kept; 'aps', which is the location where the hardware stored the program status word during the trap; and a 'trap type' which encodes which trap occurred. The trap types are:

1. The first part of the report deals with the general situation of the country and the progress of the work during the year. It is a summary of the work done and a statement of the results achieved. It is a statement of the work done and a statement of the results achieved.

2. The second part of the report deals with the details of the work done. It is a statement of the work done and a statement of the results achieved. It is a statement of the work done and a statement of the results achieved.

3. The third part of the report deals with the details of the work done. It is a statement of the work done and a statement of the results achieved. It is a statement of the work done and a statement of the results achieved.

NAME

dmesg - collect system diagnostic messages to form error log

SYNOPSIS

/etc/dmesg [-]

DESCRIPTION

Dmesg looks in a system buffer for recently printed diagnostic messages and prints them on the standard output. The messages are those printed by the system when device (hardware) errors occur and (occasionally) when system tables overflow non-fatally. If the - flag is given, then *dmesg* computes (incrementally) the new messages since the last time it was run and places these on the standard output. This is typically used with *cron*(8) to produce the error log */usr/adm/messages* by running the command

/etc/dmesg - >> /usr/adm/messages

every 10 minutes.

FILES

<i>/usr/adm/messages</i>	error log (conventional location)
<i>/usr/adm/msgbuf</i>	scratch file for memory of - option

BUGS

The system error message buffer is of small finite size. As *dmesg* is run only every few minutes, not all error messages are guaranteed to be logged. This can be construed as a blessing rather than a curse.

Error diagnostics generated immediately before a system crash will never get logged.

0.814 for RK07

To format one or all tracks of a FUJITSU M2312K drive with an EMULEX SC02 or a DATARAM S04/A controller see *check(8)*.

SEE ALSO

rl(4), rm(4), rx(4), hp(4), hk(4), check(8), mkfs(1M)

BUGS

Eventually the Minitor response the loading command with 'can't find file'. Ignore the message!

Figure 1

Figure 1

Figure 1 shows the results of the experiment. The data is presented in a table format.

The table shows the results of the experiment for different values of the parameter α .

The results show that the value of the parameter α has a significant effect on the results of the experiment.

Adresse 1. Karte	FFFD40	176500
Adresse 2. Karte	FFFD60	176540
Adresse 3. Karte	FFFD80	176600
Adresse 4. Karte	FFFDA0	176640
Adresse Console	FFFF70	177560
Vector Console	C0	60
Adresse MUX-KE	FFFE010	160020
Vector MUX-KE	380	340

BRUECKENEINSTELLUNGEN :

1. Karte :	H#	12#	5#	11#	6#	10#	7#	9#	8#	L#

2. Karte :	H#	12#	5#	11#	6#	10#	7#	9#	8#	L#

3. Karte :	H#	12#	5#	11#	6#	10#	7#	9#	8#	L#

4. Karte :	H#	12#	5#	11#	6#	10#	7#	9#	8#	L#

Diese Zeichnung ist unser Eigentum. Vervielfältigung, unbefugte Vernetzung, Mitteilung an andere ist strafbar und Schadensersatzpflichtig.

Ausgabe																				
Änderung																				
Tag																				
Name																				

Freiwilltoleranzen

83 Tag

Bearb 1.12

Gepr

1.12

W. Kreis

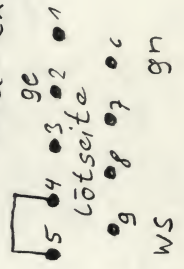
DSG

FORMEL - COMPUTER SYSTEM

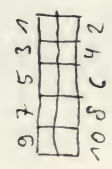
Verbindungsplan		DLVM]-Gehäuseanschluss-D56 970	
Maßstab			

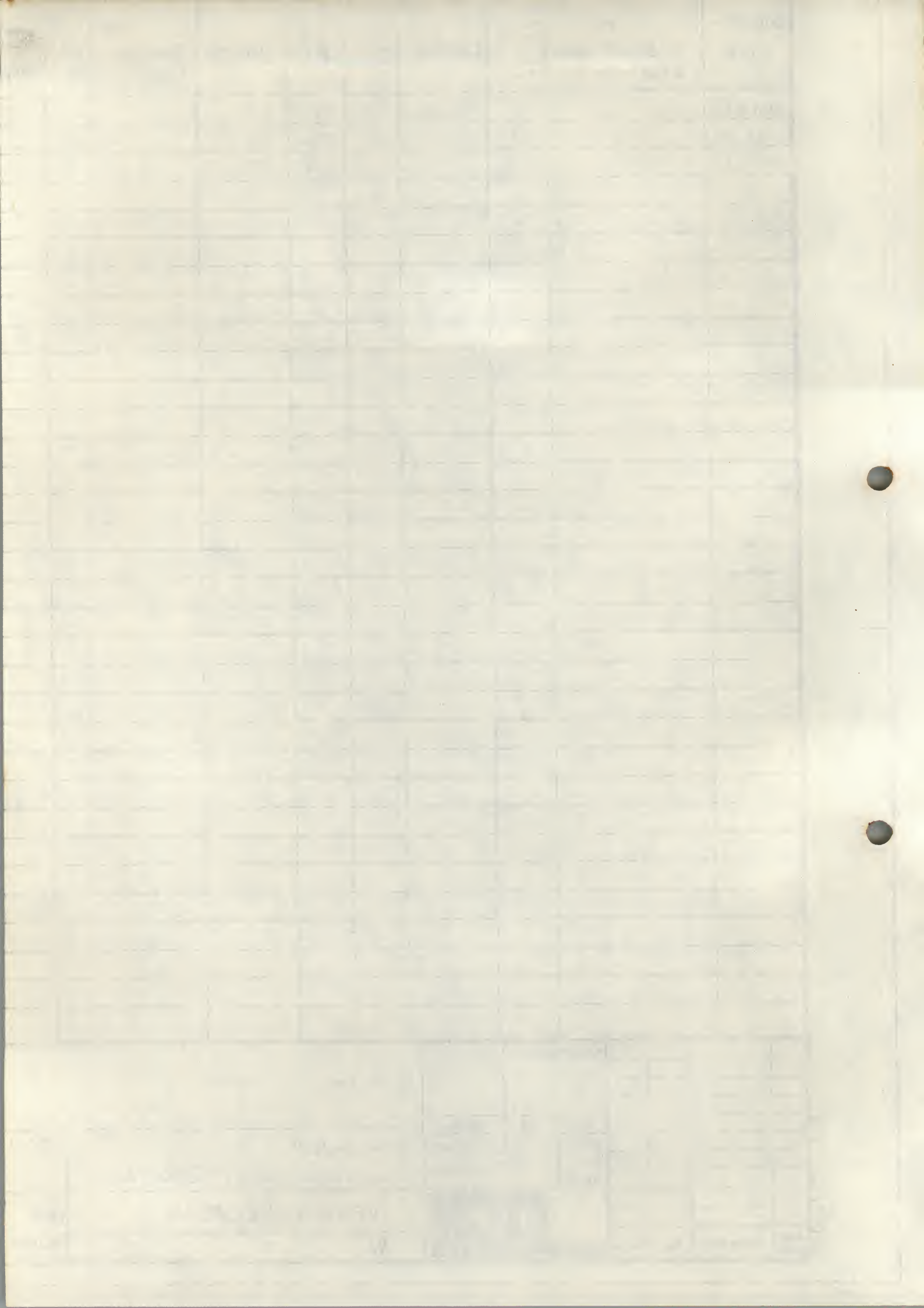
DLVM]		Rückwand		kabel (Rückwand)		kabel (DSG 970)	
10 pol. Pfostenverbinder		9 pol. Cannon-Buchse		9 pol. Cannon-Stiftleiste		25 pol. Cannon-Stiftleiste	
Bezeichnung	Pin	Pin	Pin	Pin	Pin	Pin	Pin
GND	1	---	1	---	---	---	---
XMTDATA +	2	---	6	---	6	gn	---
	3	---	2	---	2	ge	---
	4	---	7	---	---	---	3 ge
	5	---	3	---	---	---	---
	6	---	8	---	---	---	---
RCVDATA -	7	---	4	---	4	---	---
RCVDATA +	8	---	9	---	9	WS	---
GND	9	---	5	---	5	---	2 WS
	10	abgezweigt		---	---	---	---

Datenkabel (ründ)
CY 2 x 2 x 0,14



10-pol. Flachkabel





Technical drawing of a mechanical component, likely a valve or actuator, showing a cross-section. The component has a central hexagonal feature and a circular feature. The drawing is labeled with '1' and '2'.

Gehäuse
8590.080
DB51212-1A
Cannon

Datenkabel, abgeschirmt
CY 2x2x0,14
8402.111

A diagram of a 15-pin D-sub connector. The pins are numbered as follows: 1 (top right), 5 (top left), 10 (bottom left), and 6 (bottom right). Pins 2, 3, 4, 7, 8, and 9 are also present but not numbered in this specific diagram.

Gehäuse
8590.051
Harting

9 pol. Stiftleiste
\$501.001 Cannon

Vernriegelungshebel
8590.083

Die Zeichnung ist unser Eigentum. Vervielfältigung, unbefugte Verwertung, Mitteilung an andere ist strafbar und schadenersatzpflichtig.

[illegible]

Section 1
1880-1881

Section 2
1882-1883

Section 3
1884-1885

Section 4
1886-1887

11

12

13

14

15

16

17

18

19

20

21

22

23

DATE: 24.11.83-sk No: 15a / Speth

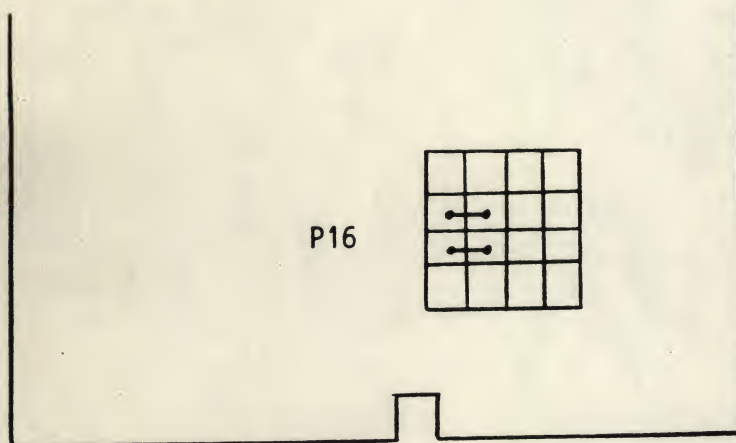
Ref: Interrupt-Level bei der SLU-4/GTSC 304

TECH INFO

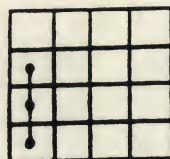
V: ☐

Bei der seriellen Schnittstelle SLU-4 in der Ausführung GTSC 304, B922.101 (nicht beim Original DEC-DLV11-J-Board) ist der Interrupt-Level 4 einzustellen. Der Interrupt-Level spielt zwar bei Schnittstellen, die über den MUX-KE laufen, keine Rolle. Die Systemkonsole arbeitet aber interrupt-gesteuert. Damit kann es zu Systemabstürzen kommen, wenn:

- die Baugruppe GTSC 304 auf Level "LSI11/2" eingestellt ist, und
- ein Controller hinter der GTSC 304 mit Interrupt-Level 5 (oder 6 oder 7) arbeitet, und
- beide Einheiten gleichzeitig einen Interrupt absetzen.



nicht:



hce

SECRET

SYSTEM OVERVIEW

TECH INFO

The system is designed to provide a secure and reliable method of data storage and retrieval. It is capable of handling large volumes of data and is designed to be scalable and flexible. The system is designed to be easy to use and is designed to be secure and reliable.

The system is designed to be easy to use and is designed to be secure and reliable. It is capable of handling large volumes of data and is designed to be scalable and flexible. The system is designed to be easy to use and is designed to be secure and reliable.

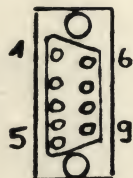
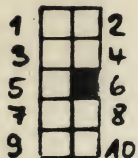
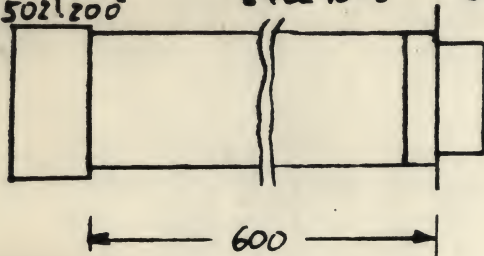


Kabel 1

3M-Nocken-
verbinder
10-polig
8502.200

Flachkabel 10-pol.
8402.010

Gerätescklar
9-pol. Buchse
8502.345

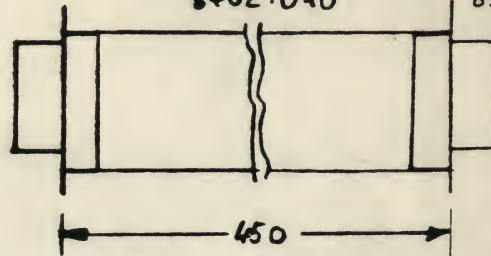


Kabel 2

Gerätestecker
9-pol. Stift

Flachkabel
8402.010

Gerätestecker
9-pol. Buchse
8502.345



Signal- bezeichnung	DLV11-J 10-pol. 3M	Steckerfeld 9-pol. Gerät Buchse	Verb. Kabel 9-pol. Gerät- Stift	Verb. Kabel 9-pol. Gerät Buchse	
NC	1	1	1	1	
SIG GND	2	6	6	6	
DATA IN	3	2	2	2	
NC	4	7	7	7	
NC	5	3	3	3	
NC	6	8	8	8	
DATA OUT-	7	4	4	4	
DATA OUT+	8	9	9	9	
SIG GND	9	5	5	5	
NC	10	—	—	—	

Diese Zeichnung ist unser Eigentum. Vervielfältigung, unbefugte Vervielfältigung, Mitteilung an andere ist strafbar und schadenersatzpflichtig.

Freimaßtoleranzen

Kabel 1, 2

83 Tag Name
Bearb. 12.12. Wexlphal
Gepr.
1.3mm

kabel DLV11-J → Steckerfeld

Maßstab

PCS
PERIPHERIE COMPUTER SYSTEME

SMO 70/83-1961

Aus-
gabe Änderung Tag Name

